



Challenges to Online Education in Pakistan During COVID-19 & the Way Forward

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ABSTRACT

COVID-19 has been a nightmare for all strata of the world's social, economic and political structures. The status quo of the current system had been enormously questioned. Education is one of the most affected areas. It resulted in more than half a year's closure of the world's education system. Though advanced countries have changed their way of education from physical to online. Third-world countries like Pakistan were the most affected as they were not equipped for online education at any stage during the COVID-19 pandemic. The acquisition of this new technology from students to teachers has faced several challenges. This study highlighted obstacles to online education in Pakistan during the COVID-19 span and offered systematic solutions on how to cope with and resolve these changes in the future in the event of a new crisis.

Keywords: COVID-19, Online education, Pakistan.

1. Introduction

The COVID-19 pandemic is not only a global public health concern but also a political, economic, cultural, religious and educational one. We can see cracks everywhere on the surface and far deeper. One of the broader faults is the fracture in the learning systems of over one billion students worldwide. According to UNESCO, the COVID-19 pandemic has caused most disturbances in education systems of history and has affected almost 1,6 billion students across the continents in more than 190 countries. Closures of education have affected 94 per cent of the country's student population, up to 99 per cent of the poor and low-medium-earnings 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. This difference, for example, had hit a whopping \$148 billion annually for low-income countries and low-middle - income countries, and could now expand by up to one-third (UNESCO, 2020). The tragedy of COVID-19 and the unprecedented destruction of education is far from over. A timetable for schools to reopen has yet to be confirmed in as many as 100 countries, and states,

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leaders, parents and children around the globe are wrestling with when and how to tackle the next step. The damage they do to poor people is a lot worse. Probably 465 million kids who are given online classes can not access them effectively because they lack access to the internet. 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. The longer the school is closed, the more this lamentable decision becomes. Save the Baby, a charity, thinks it might drop out by about 10 m. Girls are most of the time (The Economist, 2020).

The recent study by UNESCO has shown that even a few weeks out of school have a regressive effect on the results of learning. For younger children, the effects are magnified by additional cognitive activity, motor and thinking skills. Secondly, a study published by the World Bank showed that three months after the 2005 earthquake, the losses in education in Pakistan were equal to 1.5 to 2 school years. A Gallup survey shows that 74% of parents already agree that education curfew should be lifted (Sattar, 2020). So, the way classroom learning used to work must change so much, leaders around the world have taken urgent actions to deal with the problem and preserve the future of the school. Their stable markets, technical development, and educational goals have reduced the likelihood of failure. Millions of teachers and students have been left at the hands of online learning by the pace and size of the educational chaos, a technique that is largely unknown and untested 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 pushed university administrations for the starting online education. it has been successful in many countries. In Pakistan, it faced many challenges since there is only 36.86 per cent of the population has access to broadband internet in 2019 observed by a recent report of Telecommunication Authority (PTA) (PTA, 2019). Throughout the crisis, the Higher Education Commission (HEC) remained pragmatic to its credit, delivering technical assistance to colleges and drafting a series of online education policy guidance. These recommendations constitute 7 documents and are accessible on the website of HEC (Banuri, 2020).

In a big global experiment in interactive learning, schools and colleges around the world have cancelled in-person teaching and switched to online education. Daily watch minutes are almost doubled when students attend normal classes at home. Many academics and practitioners are now participating in online training, competitive assessments such as PMS, CSS learning courses along with ICEP, CSPs Academy, KIPs and Education Inn. Professionals think beyond the conventional notions of schooling to better succeed in their professions, leveraging the resources of the Internet and modern software and technology. This indicates a huge opportunity for educational services to rethink schooling to address the demands of a modern economy. Online learning is here for you to stay (Li, & Lalan, 2020).

2. Emergence of COVID-19 Coronavirus

The new coronavirus was now officially named COVID-19 by WHO. "co" means "corona," "vi" means "virus" and "d" means "disease," "19" means the epidemic year first reported (31 December 2019). A large family of viruses common to numerous animal species, including animals, camels, bats and cats, are coronaviruses. They cause conditions from cold to SARS. They cause conditions. In some circumstances, animal coronaviruses can infect humans, who can spread another. This occurred in the case of SARS and MERS coronaviruses. It is also suggested that this might arise with the Chinese virus in this case. Coronaviruses usually cause moderate but often lethal respiratory infections in humans (THUBURN, 2020).

In Wuhan, China, the COVID-19 outbreak occurred on December 31, 2019. China replied rapidly with the closure of Wuhan's seafood market on January 1, 2020. The Chinese initially rebuked the threat of the virus, but China improved its emergency measures after the first death on January 11. Just two days later, on the 13th, the WHO announced the first case outside China, in Thailand. Wuhan City has been put under quarantine. On 23rd, air and rail traffic was suspended. The disease was declared a global emergency by the WHO on Feb 1, 2020. The virus was formally called COVID-19 by the WHO on February 12, after more than two months, and the outbreak was declared a 'pandemic' later 11 March (WHO, 2020).

3. Scope of online education in Pakistan:

According to the Human Development Report 2019, Pakistan ranks 152 out of 189 nations in the Human Development Index (HDI). Unfortunately, as opposed to regional countries, Pakistan has not seen an increase in main education metrics, such as the literacy rate, the total enrolment ratio and education spending. Pakistan's 57 per cent literacy rate lags way behind its neighbouring countries. The dropout rate for primary schools is 22.7 per cent (3rd highest in the region after Bangladesh and Nepal), which is alarming given that it is in the formative learning stage. There are 522400 teachers in 172.5 thousand primary schools and 448100 thousand teachers in 46700 middle schools and 31400 secondary schools were functional during the 2017-18 academic year. There are 5800 higher secondary schools / inter-colleges with 123200 teachers while 3700 technical and vocational institutions with 18200 teachers. There are 211 universities with 51500 teachers in both the public and private sectors during 2018-19, totalling 1,659-degree colleges 41233 staff as observed in Economic survey. In 2018-19, enrolment increased to 1.86 million. In 2018-19, a total of 53.6 million students are projected to enrol in schools, colleges and universities with 563300 teachers serving in the entire country (Pakistan Economic Survey 2018-19).

Pakistan has one of the largest advanced education frameworks on the planet. Online training goes beyond formal education. It also includes competitive test courses and courses, improved technical skills and other non-academic subjects. Online education in Pakistan is developing at a fast pace. Statistically, in January 2020, as in Pakistan's Digital Study 2020, 76,38 million

internet users were in Pakistan, an increase of 11 million last year, 17 per cent, and a 35 per cent increase in Internet access in Pakistan (Pakistan's Digital Report, 2020).

4. Significance of online education:

Despite the unfavourable effects of the pandemic, through engaging in technologies and the online education framework, we also have an opportunity to reinvigorate our education system. By developing online education in Pakistan, there is still a simple way to tackle this suffering. For the troubled education sector in Pakistan, online education is cost-effective, innovative and savvy. In Pakistan, there is a high potential for online education, and this is a great opportunity provided to us by COVID-19. We need to turn this global crisis into an opportunity for all citizens through an online and egalitarian system. Online education has a lot of benefits.

Firstly, once online education becomes the rule, there is no question that there are many advantages, including cost-effectiveness. For A Standard chemistry classes, Hameed's YouTube channel has a following of over five thousand users. The monthly fee is Rs40,000-50,000 for an A-Level school on the contrary online education is cost-effective. Anyone, also teachers, can be a content maker, "he adds. The advantage of online education is at low or no expense, vast volumes of prepared material are available, most of which are digital (Jahangir, 2020). Second, students may also no longer move to other countries to obtain a better education that they are unable to access for socio-economic or political purposes in their home country. Third, online learning helps remove social and physical limits and obstacles. Online classes are a perfect solution to the problems faced by these individuals when high-quality schooling is delivered and, in their place, and time (Lau, 2020). Fourth, another major part of this revolution is the rise in jobs. Skilful educators and trainees will extend their scope through online education. Fourth, Pakistani students will undergo instruction from the world's top-notch professors and instructors. Fifth, Online Education offers the opportunity for practitioners to expand and upgrade their skill set whilst working concurrently. Sixth, this allows us to keep up to date with new trends and innovations. This pandemic could transform education fundamentally for the better. The field has been conservative and hostile to reform throughout history. It had slate for decades, and then came a century of blackboard and chalk. Students are now only a finger click away from Google's massive knowledge, so much better than any actual teachers. Seventh, Microsoft Teams, Zoom, and Google Classroom schools were provided by Coronavirus. The technology transforms a mobile screen into a classroom where students and teachers see each other through a fully interactive online learning environment and can challenge each other. Our students want immersive lessons like these. Eighth, long field rides are eliminated; some students drive two hours a day. They allow an excellent physics teacher to meet not only his or her pupils but those in schools that do not have a physics teacher at all. In the future, virtual classrooms could allow students to attend school in person for, say, four days, with fifth-day online lessons (Baker, 2020).

Ninth, students are learning how to use electronics for schooling, in addition to their classes. They interact with educators and use email, websites, and video conferencing to perform lessons/assignments. Using the same technology and educational tools and applications, students have developed research groups. Ninth, "We were absolutely at a lack of resources earlier when schools were closed." I am in touch with my teachers 24/7 through online learning. "In truth, they are more sensitive in this manner ... So, it is very handy," Tutors have developed course groups on Facebook and WhatsApp to help enhance file sharing. Tenth, registration limits have historically been determined by the number of specific seats in a classroom for certain classes. When any or many of the students in each classroom are online, a restriction no longer exists. Online learning, of course, does not mean that there should be no class size limitations at all, since it would remain necessary for students to connect with professors, teaching assistants, and their social group. But for most classes, without greatly altering the student's college experience, attendance could be increased by 10-20 per cent. This will encourage colleges to accept more students at a slightly lower per-student expense than happens currently if achieved at the size of an entire university. In the form of decreased fees, such benefits may be passed on to students. Eleventh, the partnership between colleges on teaching is an alternative way for colleges to save money that can be applied to students in the form of reduced tuition. Why restrict students to courses offered by their universities while teaching is online? Exchange agreements between colleges with identical academic calendars could give an opportunity to students to have seats in classes at one college. Twelfth, in this modern environment of teaching and studying, the concept of 'paying attention' in education is almost outdated. We lost important knowledge in the previous days when we didn't listen closely. Online content is often accessible and can be checked anytime. Online information can be revisited. Thirteenth, online preparation is now providing new possibilities. The sessions were also recorded in a film that could be watched many times again if you skipped the major points in the class (Moore, & Hodges, 2020)

5. The perils of online learning:

The pandemic of COVID-19 has adversely affected millions of Pakistani students' education. The likely impact of parents and teachers on students' short-term progress and long-term development is particularly disturbing. No wonder, it has a harmful and overwhelming effect. Closures have a greater negative impact on low-income students or rural schools. The apparent benefits of online schooling remain to be considered, mainly in view of social inequalities and disinvestment in the area of technology, infrastructure and education. Below are some of the difficult effects:

First, given the high momentum, there are still no Internet opportunities known to be permanent alternatives to classrooms. The technology sector will at best develop a successful supplementary learning framework. Secondly, it must be recognised that not only the

classroom encourages us to travel abroad but also the irreplaceable cultural interactions that foreign travel offers. Thirdly, certain questions, such as confusion about accreditation and quality management, remain unanswered. Fourth, the lack of adequate IT infrastructure can also be a disincentive in smaller educational centres. Fifth, a drastic change to online schooling is likely to increase the literacy gap for low-income families, districts and developing nations. Online education is an elite practise that can only work well in advanced countries. Similarly, the lack of an education at home; the absence of child and parental attendance; family poverty; stresses on domestic responsibility; and the absence of fathers because of distance jobs can lead to irreparable loss of learning for these children (Haris, 2020).

Sixth, Pakistan's online education still faces many logistical problems, including secure electricity, strong internet access, a scarcity of digital devices and their know-how, and a scarcity of cybersecurity knowledge. There is no TV at home for the bulk of students. If some do, they won't benefit from 14-16 hours of load-shedding in rural areas. Seventh, after the Corona scene is over, there is a concern that school administrators will use an online learning system to reduce the number of teachers. Eighth, they often sacrifice interaction with people, such as athletics and extracurricular events that are as meaningful as the quality of the programme. Ninth, it will offer several courses exclusively online. Instructors should adapt their teaching for online distribution in any situation. But online training, even if provided by a devoted and competent teacher trained in remote teaching instruments, is simply not as good. A course is often made successful by the unscripted experiences that take place before and after the class as students meet, and by the basic fact that at least some time and energy is needed for the actual process of getting to class. In short, attending a well-run class in person is immersive and challenging in a way that much beyond all that digital technologies may expect to offer now or soon. "Ninth, since the March 2020 transition to online learning, the many college students who find it more difficult to concentrate on their classes are not lazy; they are merely human." Not only does a class encounter limited to a desktop computer require physical separation; it also creates a relational barrier that makes focusing attention psychologically more difficult. Eleventh, everybody understands that a lot is missed as instruction is pulled out of the classroom and into Zoom. Students, teachers, and college administrators. But right now, at least, universities are unable to cut tuition accordingly (Villasenor, 2020).

6. Government Response

In Pakistan education never has been the governments' top priority. The dilemma is so persistent that it does not make a difference that which political party or power elite is ruling in the country. Government has steadily lessened the lockdown and presented a novel term of smart lockdown. Education remained closed for about six months despite opening of other sectors till 15 September in Pakistan. The only good government for schools was during the lock-down on April 14 when the first-ever television school was launched in Pakistan in order to aid public school students and minimise their loss of learning (Abbasi, 2020). This is

a worthy initiative. On the other hand, in its first week, U.K. launched the Oak National Academy, a new online school where about 2 million students could learn. (LSEC, 2020).

HEC is mainly an advisory body in higher education and the application of its policies is mainly the prerogative of the universities. Higher education was therefore in chaos since each university had its own whimsical policies. In its policies it observed that many universities are simply not prepared for online education and it needs to get it work immediately. It also noted that students have concerns about the quality of education they are feeding. But there was a problem with faculty also in digitizing their content and digital know-how. But the reality of the ground is much to be desired. For example, soon after the lockdown, the GCU suspended educational activities online until 1 June, but so far has not been able to carry out a large-scale faculty training programme. "It was just one session of training, and I wouldn't call it adequate," says an assistant professor in the Department of Philosophy. HEC has warned that the consequences could be the cancellation of a semester even in its final policy guideline (Riaz, 2020).

7. Challenges

First, the emphasis was more on access to e-learning in the early days. Technology without equity among all our children would not lead to efficient learning. Although online learning is well received by O and A-Level students, not all schools can afford e-learning to offer it. They do not have the requisite digital content production technologies. Second, students will need to get a secure internet and mobile phones." The level of digital education we had delayed before the pandemic occurred is an area of priority. 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 stakeholders (Jahangir, 2020). Third, there was still an open query as to whether the faculty are properly qualified to teach online efficiently. Most teachers, like parents, are new to alternatives to textbook curriculum and trying to develop multimedia material that preserves the attention span of students in the interactive classroom that they do not see. "It takes a lot of time for this. 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).

Fourth, while campuses are unusual for students, institutional expenditure is on the rise. Globally, colleges are under huge pressure to repay tuition fees to enable employees to pay faculty. There is no doubt that universities also act as small towns, together with their public networks. They are also important drivers of local and regional economies that directly and indirectly support thousands of technical jobs. For education institutions, a major disruption is particularly difficult, and many universities have struggled for an unpredictable future. In the meantime, 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 (Ahmad, 2020). Fifth, an extensive increase of online training is advancing at a slower pace than expected, with development being effectively stalled at times by vague and past due standards from education regulators. In addition to pricey device licencing, unforeseen challenges are created by privacy problems surrounding instruments such as Zoom, maintaining accessibility, and most notably shifting teaching approaches from the classroom environment to a virtual one. In comparison, university training, social networking, gatherings, and the atmosphere of the classroom would all be at risk (Ahmad, 2020).

Sixth, even the success of college catering for the upper middle classes in the private sector has been far from outstanding. Students at a business school in Lahore reported that the college is planning online tests via a faulty LM that is vulnerable to crashing. Seventh, there are no notebooks or tablet computers for all classes. Parents still need the computer from home for their jobs, so kids don't have a chance to use it. Eighth, due to disruptive applications, teachers are apprehensive about learners using smartphones. Ninth, difficulties with parental support: often children face a violent home atmosphere in which family members engage in quarrels and altercations with each other. This kind of climate negatively impacts children's emotional health and therefore decreases their learning outcomes (Riaz, 2020)

8. LESSONS LEARNED & Way Forward

- Though regrettable, the transformation of school programmes globally offers useful lessons and presents a remarkable opportunity to reimagine learning, curricula and pedagogy.
- Technology can achieve comprehensive quality education and to enhance learning outcomes. But the digital divide (and its built-in gender divide) must be resolved to activate its power. Digital capabilities, the infrastructure needed, and accessibility must hit the most distant and poorest populations. Connection to technology and the Internet is a question of importance in the information age. This should no longer be a privilege (Malik, 2020).
- While teachers are trying to learn digital ways to connect with their pupils, it is clear that we need to pay careful attention to what we teach. This crisis tells us that curricula must be grounded in students' experiences, promoting vital, imaginative, and versatile thought, tolerance, and students' compassion.
- The recession is pressuring teachers to rethink their positions from moving knowledge to facilitating learning. The move to distance learning has created many opportunities to teach differently, to promote self-learning, to provide opportunities to learn from a variety of platforms and to facilitate personalised learning for a variety of needs through high-tech and low-tech services. Yet continuing education in the wake of school openings has also taught us a significant lesson about the role of the group in educating

our children. If it takes a village to raise a boy, we must inspire the village to educate the infant.

- Several technology-based networks, such as go prep, etc., are working to make education immersive and engaging. These channels, through animated videos and technology-based AI services, reinforce the central importance of learning and critical thought. The goal is to make learning fun and to create in it a motivation to continue learning.
- The government may consider extending school time to include extra time and teaching to compensate for the lack of schooling. Having two-way schools will also be beneficial in introducing SOPs and saving time for teachers.
- The biggest benefit of the online system is that education will become foreign. Advanced institutions such as NUML, Quaid, IIUI, and Punjab University will globalise online education while universities initially nationalise online education. Pakistan, higher education needs to be revamped. It should be agile, more creative, more multinational, but more locally linked and socially conscious, more inclusive and less risk averse. Innovative models need to be implemented.
- Profound institutional improvements in the curriculum/syllabi should be made, and initiatives should be popularised to draw students across countries. Skills learning should be part of the curriculum for engineering and science degree programmes. This is going to build potential entrepreneurs.
- The faculty must be inspired and personally engaged in the integration of the programme. The power lies in the caring faculty and institute. The Faculty must change its worldly teaching practises to respond to the development of technology-based teaching. The faculty should be established as "competent" individuals who can produce what the students expect. Research laboratories can, therefore, work as normal to facilitate research. Study partnership can be made digitally and can be internationalised. In addition to the main positions of project management and networking, senior management must have access to epidemiological knowledge (Chandrasekharam, & Dornadula, 2020).
- Internet learning does not mean that there is no laboratory training for pupils. Laboratories / workshops were needed to generate expertise. Centers may be developed around countries to promote development initiatives for skills. These cores may be agencies, universities and schools. A prospective multi-pronged solution that incorporates the basic concepts of management and industry with creativity, healthcare, policy making, and technology may be useful to developed countries in this period of crisis. In a country like Pakistan, where over 60 % of the population is under the age of 25 years, such a policy would undoubtedly build a stronger future for both finance, manufacturing and governance industries over the years.
- In Pakistan, the higher education sector has a unique opportunity to capitalise on an increasing number of employers pursuing training programmes which closely match

the requirements of this emerging global market. In this new education system, the business sector should play a leading position. This is one approach to solve insecurity and develop the entrepreneurship capabilities of young people.

- On the testing front: it's all cooperation, not competition. Projects need to be built by cooperation such that laboratory/research equipment can be shared. This would lead to stronger research laboratory centres throughout the area — for example, there might be significant cooperation within the Asia region. There's none so far.
- In contrast, because there is no single scope or service in two schools, a single-size option will be excluded from the window. It needs to be taken home because 'nice' is better than 'perfect' later in periods of distress and temporary measures to address health, protection, teaching and learning processes as well as financial and legal concerns would prove to be more effective than waiting for direction from central officials.
- Equity-based initiatives may also be adopted by universities — many students have no tools or connexions to complete their on-line classes. Measures must be established and taken to address future delays and threats to programme execution. This can be supplemented by project-based learning and joint credit planning. In addition, simplifying the graduation requirements would also allow not only candidates, but also universities to build future cohorts. Higher education agencies must create strategic decisions in terms of employees — from instructors to janitors — as well as third party providers outside financial concerns.
- Decision-makers must strategically leverage and allocate resources such that smaller companies can use expertise from larger universities. Video and audio lectures may be filmed, and multimedia networking exchanged.
- Now might be a good time for schools and colleges to partner with existing educational institutions to promote online learning through teacher preparation programmes and free digital services. Getting on a technical vehicle now will make it easier for most students and teachers to get on a competitive edge until they have prepared themselves with the demands of working online.
- Several schools are also implementing 'parent facilitation services' to provide the awareness and guidance available for parents who are new to technology. When we stand at this extraordinary crossroads, parents may be a critical cog that will help schools move children into this new era. COVID-19 has also shown us that adult education is just as critical for a country like Pakistan as schooling for girls.
- Odd-Even school formula: in the face of a pandemic that does not display symptoms of school dropout, an odd-Even formula for children to attend school on alternate days should be implemented. Such a situation will lead to both synchronous and asynchronous learning periods for infants. In asynchronous time, in school days, children can learn ideas and skills from their teachers. In the asynchronous period, children may revise their previous day's learning and conduct a task or task focused on

the subject in conjunction with parents. Teachers can additionally assist parents with this by calling them by phone.

- The pandemic has taught us a lot about responding to developments in fresh and innovative ways. But it is as important to have the poorer pieces along. The prospect of high and low-tech strategies for digital learning needs to be discussed based on power supplies, the technology capabilities of teachers and students, and internet access. Inclusion in distance learning programmes, particularly for students from low-income communities or with disabilities, etc. Provide resources for digitalization to teachers as well as students by making those sites and content accessible free of charge, and by providing the appropriate infrastructure for online learning, such as smartphones and laptops.
- The Center and state governments should begin making access to technology universal and more practical in the public-school system. Besides, as part of Corporate Social Responsibility, private actors may engage tech-based organisations to make e-resources available and affordable to students, especially in government and low-income private schools.
- The concept of the right to education ought to extend and encourage online education to resolve the value of accessibility and access to knowledge and information.
- Digital engineering offers a ground-breaking platform for the democratisation of education. O However, there is a need to foster environments that allow primary educators autonomy and freedom to work collaboratively.
- Conventional classroom institutions must give way to online education. School or schooling as a shared room is indispensable, nevertheless. Ensuring science literacy within the curriculum is the best time to think critically about the curriculum, particularly when a culture still struggles against superstitions and vigorously fights against misinformation.

9. Conclusion

As Pakistan shifts from the worst day of the recent coronavirus pandemic, schooling has a real opportunity to turn a new leaf and use the opportunity to shift towards a better future. This will mean thinking outside traditional boxes and incorporating innovative, proactive and positive strategies across the whole field. More broadly, on-line schooling has been a key aspect of the pandemic. Along with the many obstacles that exist, there are ways to make schooling more available and more affordable. Summing up, online education is all set to change the educational scenario in Pakistan and the world at this point. It will, however, entail a major change in pedagogy to take advantage of advancement in this area. Technology can be used to enhance discussions between teachers and pupils, not to kill them entirely. Technology must be used as a schooling aid, not a substitution for it.

10. Competing Interests

The authors declared that no conflict of interest exist.

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