

Digital transformation of learning due to COVID 19

Naveed Malik

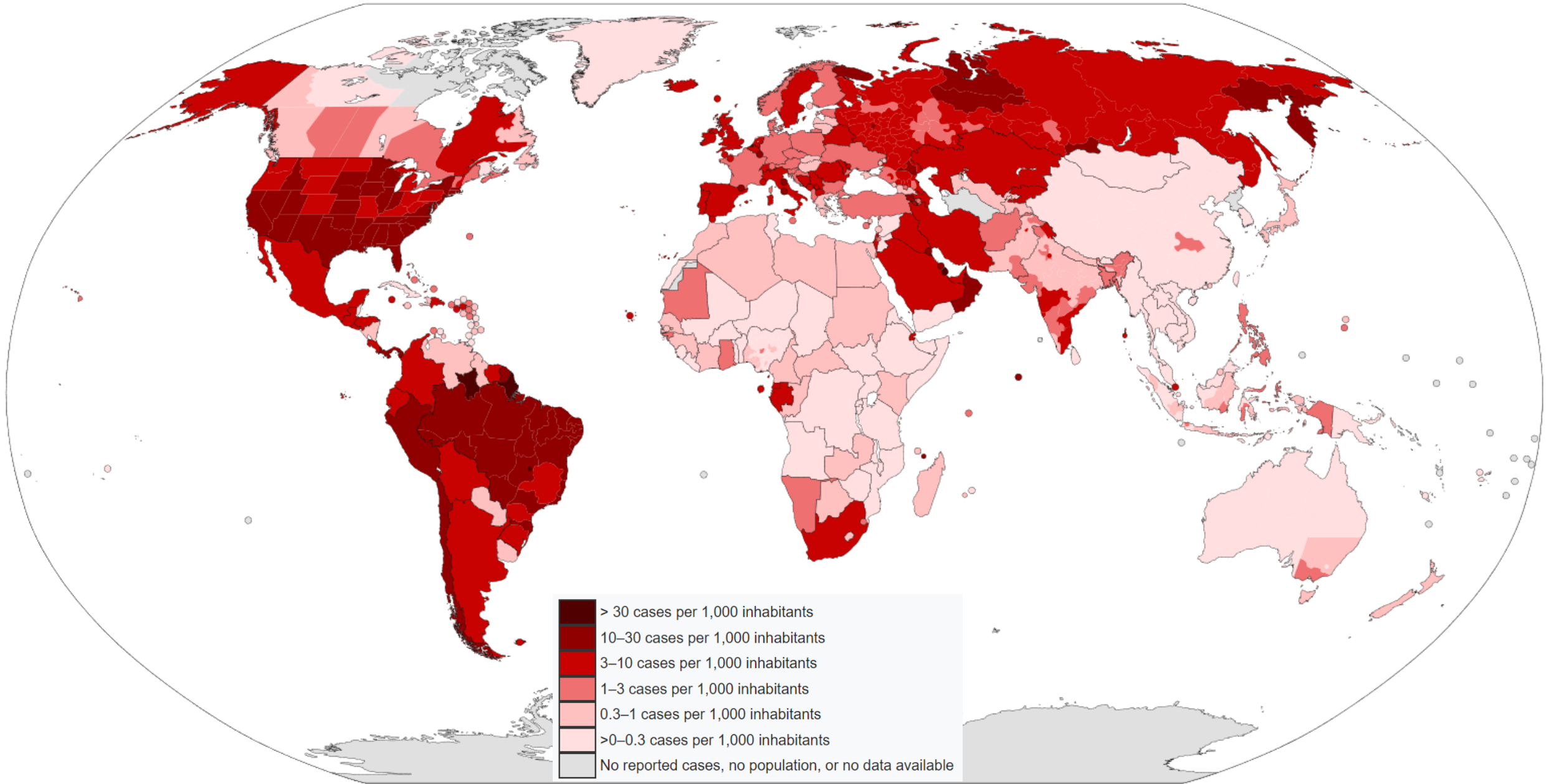
August 10, 2020

Outline

- The Pandemic – background
- Effects on education – school to university
- Approaches taken by various countries and institutions
- The haves and the have nots – the digital divide
- Schools and Universities
- The opportunity – infrastructure and content
- What does the future hold?

The Pandemic

- Caught the world unawares
- Speed of spread brought life to a standstill
 - 31st December 2019 – first case reported by China
 - WHO declares pandemic in mid-March
- Breadth of the spread is unprecedented
 - No corner of the globe has been left unaffected
 - Countries that had declared victory have gone back into lockdown



https://commons.wikimedia.org/wiki/File:COVID-19_Outbreak_World_Map_per_Capita.svg (August 8, 2020)

Effects on Education

- All schools were closed
 - All universities ceased operations; hostels emptied
 - Even on-line universities stopped because of staff unavailability
 - Even Convocations went virtual!
-
- Some pre-school and elementary schools remained open to provide services for children of essential service workers

Effects on Education

- By mid-May:
 - Worldwide: more than 1.5 billion students' studies were interrupted
 - Commonwealth (including Pakistan): more than 574 million learners had been impacted!
- Interruption of studies affected all lives
 - Parents found their resources strained
 - Parents of younger children faced problems
 - Especially front-line health workers
 - School and university staff were laid off

As we move forward

- As the world emerges from the pandemic
 - “business as usual” will no longer be tenable
- Many versions of the “new normal” are being tried
- Education is leading in defining the new normal
- There is no single solution applicable around the globe
- Digital divide has become starkly visible
- Most approaches center around the use of technology

Disparities in emergency preparedness

- Logical choice – go online
- Reality:
 - Nearly half the world has no Internet access
 - Majority of schools in the developing countries are technology constrained
 - Schools do not have equipment to teach online
 - Students do not have access to devices and the Internet
 - Shortage/nonexistence of digital learning materials
 - Teachers ill-equipped and untrained for online education

Resilience of mankind

- However, people did not give up
- Teachers learned quickly and acquired new skills
- Developed content to the best of their abilities
- Tried various techniques for engaging students

Digital Transformation

Schools (developed countries)

- Teachers engaged with their students using videoconferencing
- Gave students activities and projects to do
- Came back online to discuss progress (typically the next day)

However

- Assumption: adequate bandwidth at home
- Enough devices to cover all siblings if more than one
- Not always true

Digital Transformation

- Schools (developing countries)
- Adopted many blended learning approaches
- No interaction during lockdowns
- Broadcast media used to deliver education
- However, no possibility of interaction
- Basically, operations halted till lockdowns eased

Digital Transformation

Higher education

- Not much different
- Clear divide between developed and developing countries

Similar challenges

- Teachers had to learn to teach online
- Every approach / technique was used
- Different technologies were tried

Digital Transformation

Higher education approaches

- From photographing and sharing course notes via social media to
- Developing and delivering lecture videos

Synchronous sessions

- Similar challenges as school level education
- Even print media used to deliver content

Digital Transformation

Learning Management Systems

- Institutions showed varying levels of capability to induct LMSs
- Infrastructure challenges
- Trained manpower shortages
- Steep learning curve
- Availability of H/W platforms and familiarity with them

Still

- Constrained by shortage of available content
- Limited content development capability of face-face professors

Digital Transformation - Opportunity

Institutions using e-Learning have a distinct advantage

- Already have platforms established
 - Develop custom content or use OER
 - Faculty already trained to mentor online
 - Can step up to lead from the front
 - Become thought leaders for the sector
-
- E.g. Virtual University of Pakistan

Digital Transformation - MIT case study

- Classic example of high intensity face-to-face environment
- No stranger to e-content development – OCW, EdX etc.
- Education shut down totally during the pandemic
- However, thinking and planning continued

Digital Transformation - MIT case study

- When studies resume in fall:
 - Shorter terms (start early and conclude any f-f classes early)
 - Semester to be finished remotely
 - Only some undergraduates will be allowed back on campus
 - Everything that can be taught online, will be taught online
 - Small-group in-person experiences for courses requiring labs
 - Hostels will be re-allocated to ensure one student per room!
- **Capacity will be constrained!!!**

Digital Transformation - MIT case study

- Mandatory Covid-19 testing before return and regularly thereafter
- Mandatory public-health education
- Mandatory wearing of masks
- Physical distancing and Contact tracing
- Staggered scheduling and reconfigured work spaces
- Enhanced cleaning protocols
- Access to buildings through a single point and only with an MIT ID
- No large gatherings or lectures

Life will just not be the same!

Digital Transformation

- Universities will learn to cope
- What about schools?
- The problem is much larger
- However, there are opportunities!

Digital Transformation - Schools

- Teachers will definitely need training
 - For content development
 - In the use of OER
 - In the use of a digital environment
- Administrations will need training
 - How to cope with new environments
 - Lower student counts
 - Digital resilience and robust infrastructure

Digital Transformation - Schools

- E-Learning enabled universities could take the lead
 - Help train teachers for the new environment
 - Develop/adapt content for use by schools
 - Act as the proverbial “big brothers”
-
- Governments’ support will be needed in terms of infrastructure

Digital Transformation - Schools

Case study: Pakistan

- Virtual University of Pakistan – on the spot at the right time
- Has huge amount of expertise and experience
- Knows how to establish and maintain infrastructure (H/w and S/w)
- Has a network of digitally enabled campuses across the country
- Campus network could assist school sector – minimize new expense
- Can even assist with teacher training throughout the country

Digital Transformation - Schools

- Commonwealth of Learning
 - Has helped many countries with establishing LMSs or MOOC platforms
 - Has the Open Schooling Model
 - Focused on out-of-school children
 - Could easily be adopted for mainstream schools
 - Would help overcome the capacity shortage introduced by the pandemic
- VUP could;
 - Develop content for use by all schools – uniform high quality ensured!
 - Especially important with the new curriculum being introduced
 - Institute the Open School model through its virtual campuses
- Major step forward for school education in Pakistan!

Digital Transformation of Learning due to the COVID-19 Pandemic

Where there are threats, there are also opportunities

Thank you



The contents of this presentation, except logos/ graphics which are property of the respective owners, is made available under [Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](https://creativecommons.org/licenses/by-sa/4.0/).