

COMMONWEALTH  
*of* LEARNING

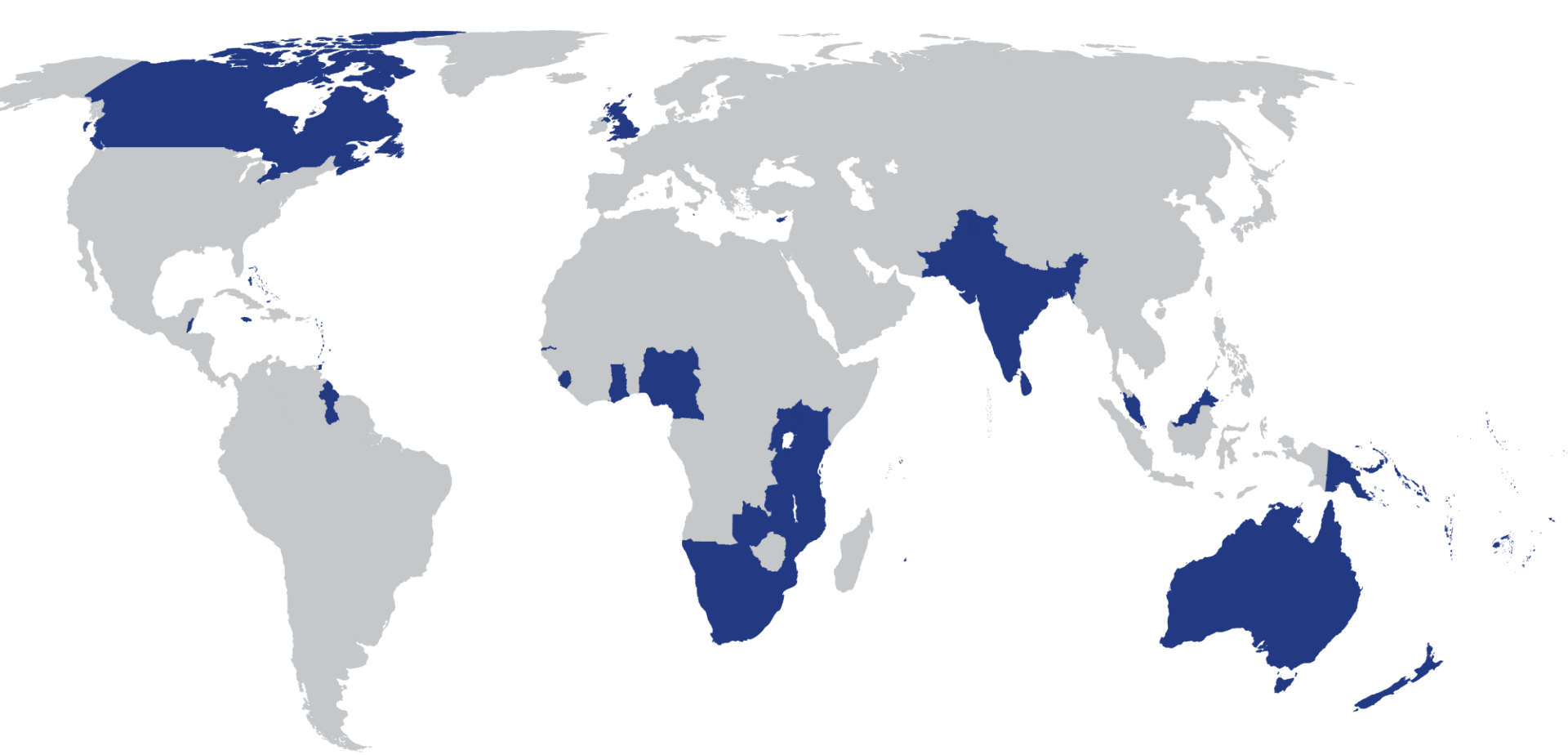


# Brave New World That Has Such Education Futures!



December 1, 2020

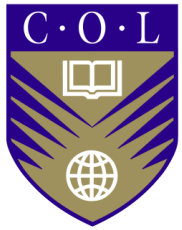
Professor Asha Kanwar  
President & CEO, Commonwealth of Learning



# The Commonwealth

54 developed and developing nations around the world





# COMMONWEALTH *of* LEARNING



To help Commonwealth governments and institutions use technologies to improve and expand access to education and training



# Plan

- Issues during COVID-19
- COL response
- Futures of Learning
- The Future we want

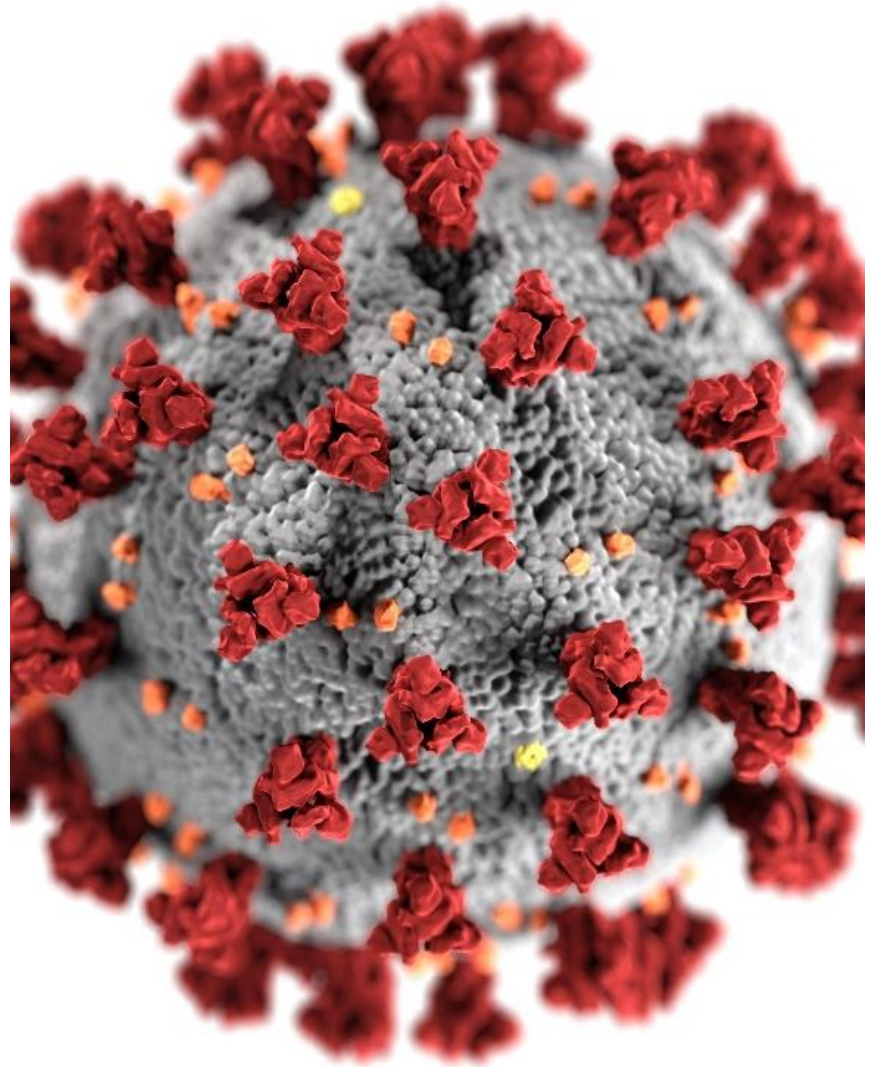


# Issues during COVID-19

# COVID-19 and Education

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- Technology (Connectivity, costs and electricity)
- Teacher Capacities
- Inequalities



# 1 Technology issues: Stanford University

- 16% undergraduates did not have access to internet for half the time
- 60% of low-income students did not have a private place to study



Source: <https://www.tonybates.ca/2020/08/30/lessons-from-stanford-universitys-move-to-remote-learning/>

# University of Hyderabad

- 40% students indicated “unreliable connectivity
- 30% worried about cost of data
- 18% can’t access online classes at all.





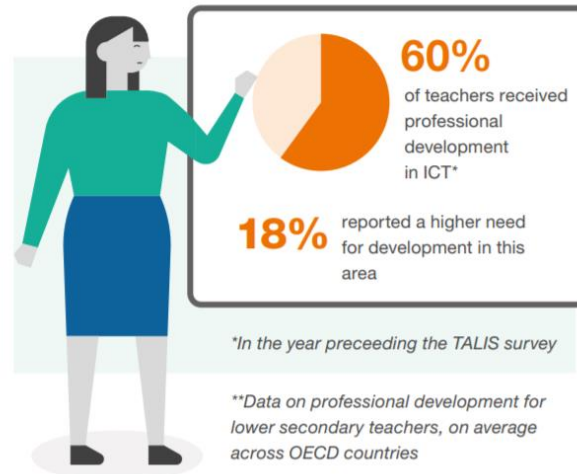
## 2. Teacher Capacities

- ICT for teaching and learning
- Assessment of learning outcomes
- Access to technology

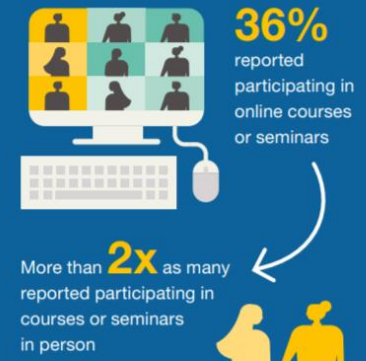


### Teachers' preparedness to support digital learning

Teachers have reported high need for training in the use of information and communication technologies (ICT):

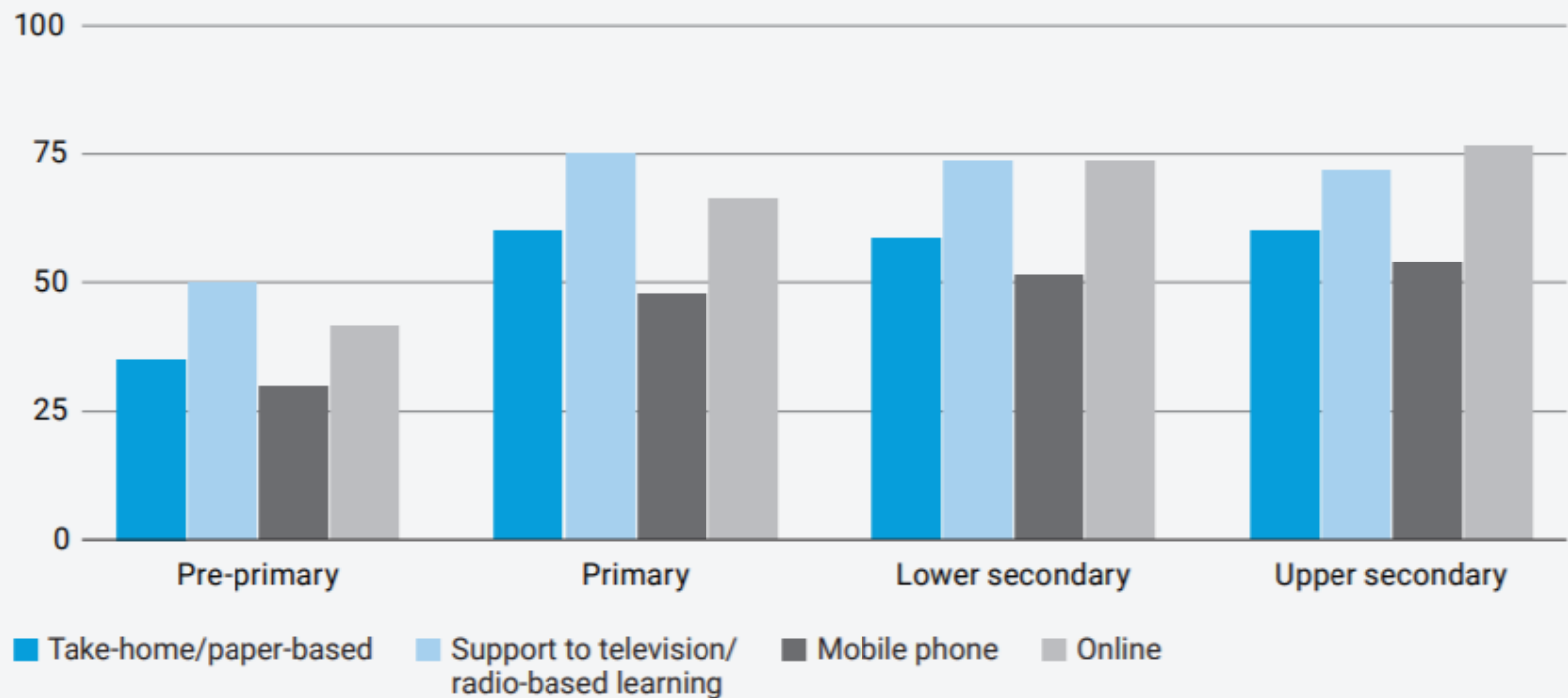


Teachers are also not relying heavily on distance learning for their own development\*\*



Source: <https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf>

# Teachers engaged in alternative teaching



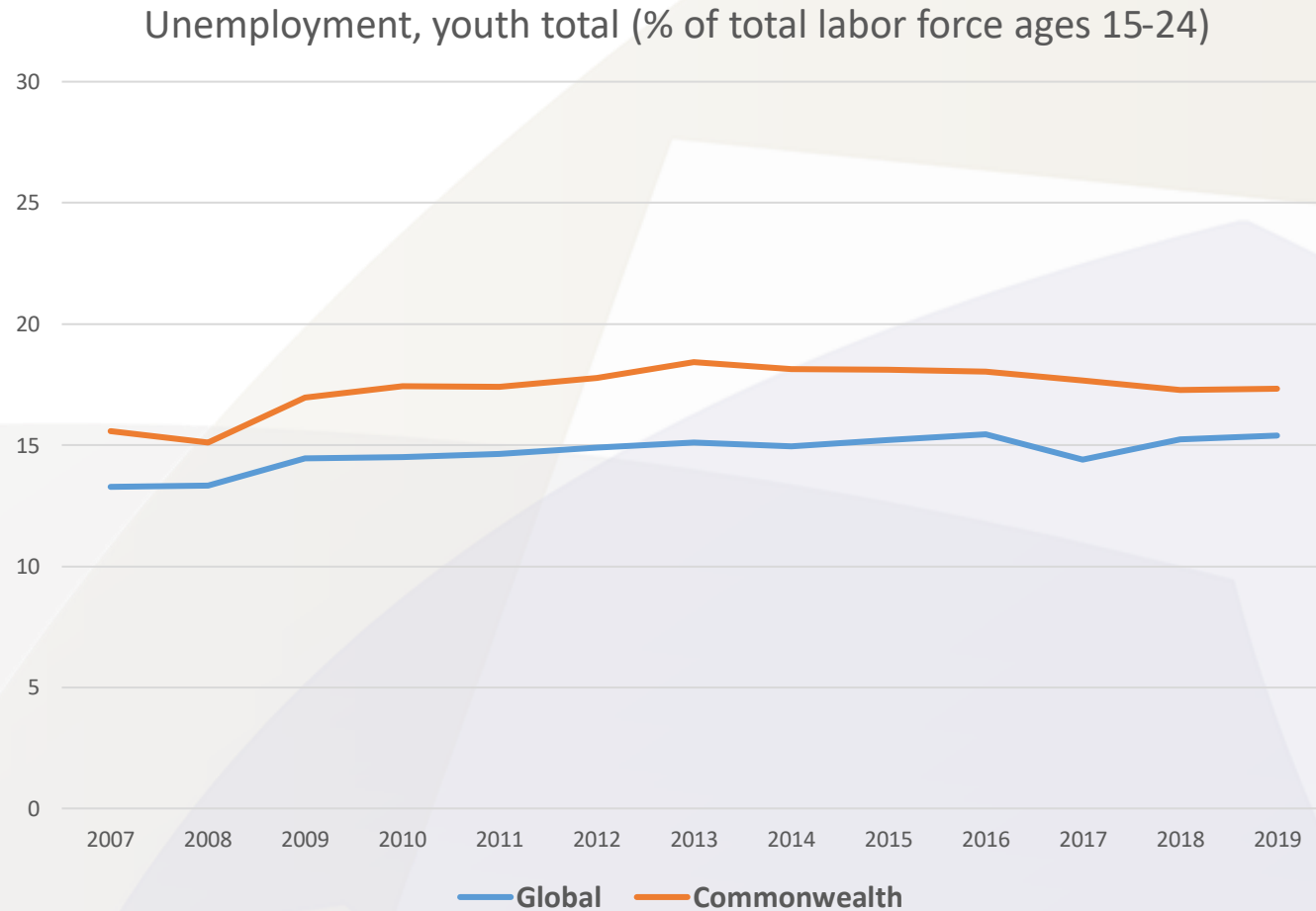
Source: UNESCO-UNICEF-World Bank Joint Survey, May-June 2020, available at <http://tcg.uis.unesco.org/survey-education-covid-school-closures>.

# 3. Inequalities



Source: <https://en.unesco.org/covid19/educationresponse/girlseducation>

# Youth unemployment

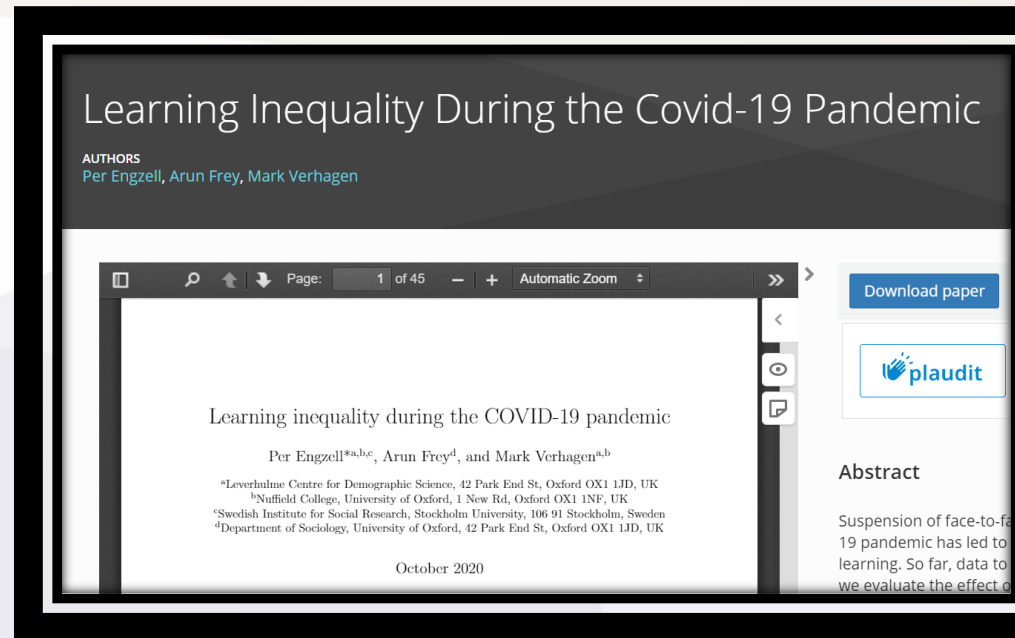


Source: [data.worldbank.org](https://data.worldbank.org), retrieved on 11 June 2020



# Learning Inequality during COVID-19

- Learning loss of about 3%
- Learners from less educated home 55% more prone to learning loss



# COL Response

# COL's multi-pronged Approach

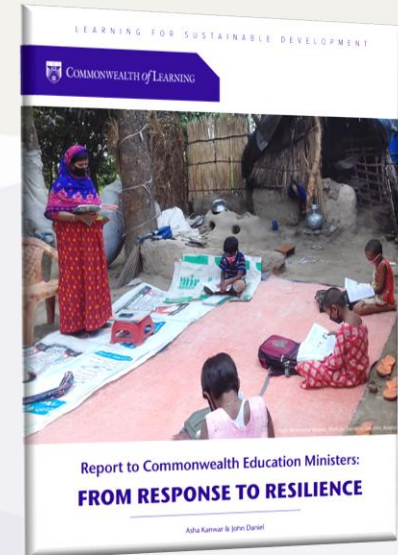
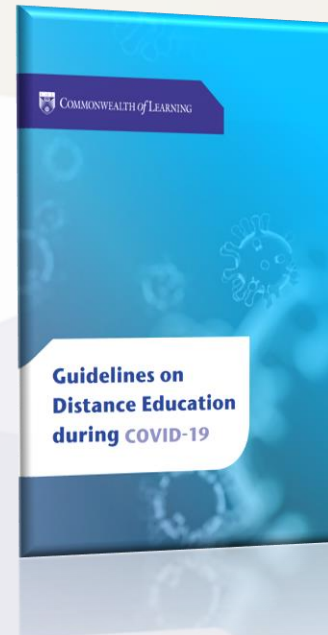
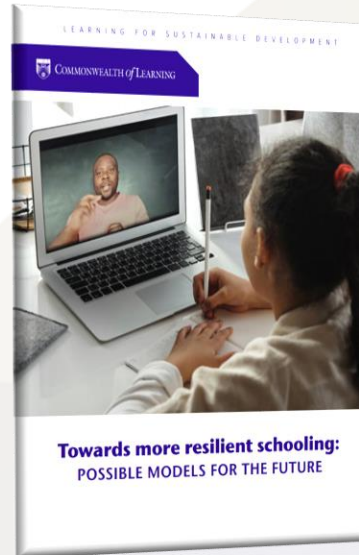
Guidance &  
Advice

Capacity  
building for  
Teachers

Responding  
to country-  
specific  
needs

Promoting  
collaboration

# Guidelines





# Capacity Building of Teachers



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Teacher**Futures**

## Cybersecurity Training for Teachers (CTT 1)

<https://www.mooc4dev.org/CyberSecurity4Teachers1>



## Mobile Learning with Multimedia

Starting October 12, 2020  
Duration: 4 Weeks

 COMMONWEALTH of LEARNING | Teacher Education

Teacher**Futures**



**MOOC**

Introduction to  
**Technology-Enabled Learning** 5

5 April - 9 May

<http://www.telmooc.ca/>



**MOOC**

**Blended Learning Practice** 2

19 April - 16 May

<https://www.blpmooc.org/>



# Support during the Pandemic

- **Nigeria:** dual mode
- **Antigua and Barbuda, Kenya and Malaysia:** Integrating technology
- **Zambia:** Integrating employability skills
- **Rwanda:** Online safety and privacy policy



- Support network for educators
- Share online courses
- Provide open technology tools
- Build capacity

# Promoting OER-based Online Learning

<https://oer4covid.oeru.org/>



# Content aligned to curriculum

- Video-on-demand:  
**Fiji, Nauru, Samoa**
- STEM courses



# Skilling and re-skilling



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**coursera**

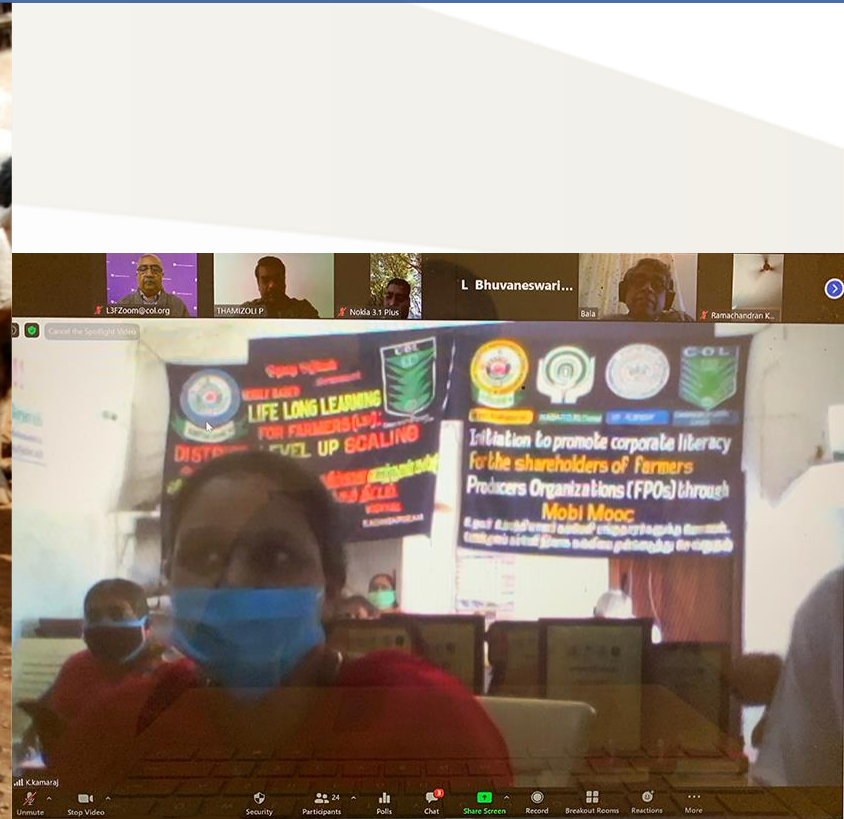
# WORKFORCE

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# Recovery Programme



# Audio-based mobiMOOCs



# International Partnership of Distance and Online Learning for COVID-19

The unprecedented developments due to COVID-19 have led to the closure of educational institutions around the world. UNESCO estimates that about 80% of the world's student population is unable to attend classes and is required to stay at home. Particularly vulnerable are those learners in developing countries who may not have access to electricity, devices or connectivity to follow online lessons which are being provided in many developed countries and urban contexts.

<https://opendoor.col.org/>

# 60+

- Intergovernmental organisations
- Universities and educational institutions
- Associations and networks

# Futures of Learning



# 1. Preferrable Future

- Universal primary completion will be achieved in 2042
- Universal lower secondary completion in 2059
- Universal upper secondary completion in 2084



# Inclusion

- Canada: 10.7%
- India: .56%
- South Africa: 1% . For example, in South Africa 80% of disabled people aged 20-24 are not in tertiary education.

Access to HE



# The 'Learning Crisis'

- In West and Central Africa, less than 45% students in Grade 6 achieved competency level in maths and reading
- In South Africa, majority of Grade 4 students displayed the capacity of Grade 1

(World Bank, 2018)



# Preferable Future of Education

- Equity
- Inclusion
- Quality
- Lifelong



## 2. Probable Future



Face-to-Face  
Courses



Blended  
Courses



Distance/Online  
Courses

- MOOC
- Mobile learning

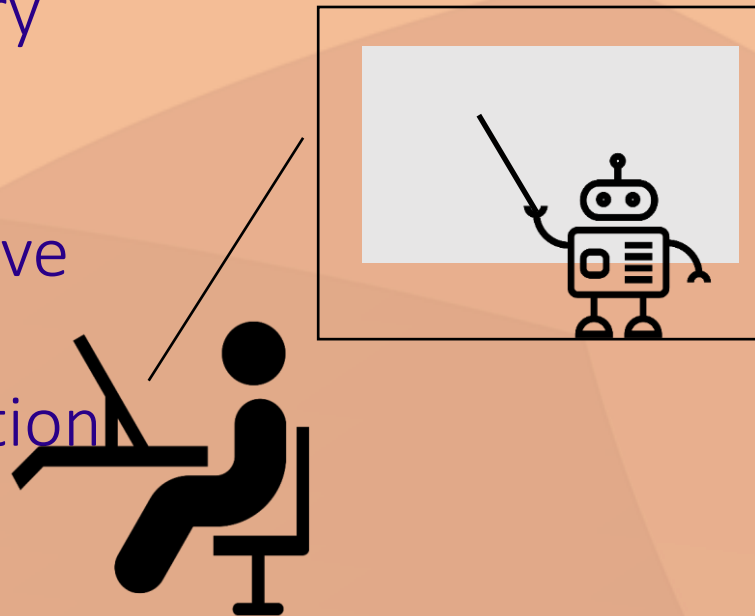
ICT integration in teaching and learning

Open and Distance Learning

# Blended Learning

# More Personalized Teaching: AI

- Can provide an intelligent, personal tutor for every learner
- Encourage intelligent support for collaborative learning
- Adaptive group formation
- Expert facilitation



Source: <https://www.ibm.com/watson/advantage-reports/ai-social-good-education.html>

# Example of AI in Education

## Use of Chatbots

**Text, Video and Animated Images** form the backbone of the chatbots. These chatbots too have QR-codes so that videos can be viewed directly from the smart-phone. While dialogues/conversation are important in learning programming but programming can't be learnt entirely through these type of communication. Thus, the chatbot also support immersive learning and visualizations, so that difficult Java programming concepts can be explained easily for easy understanding and to reduce the mental load of the students when learning programming. QR-codes, videos and animated images together provide the immersive learning environment in the chatbot.

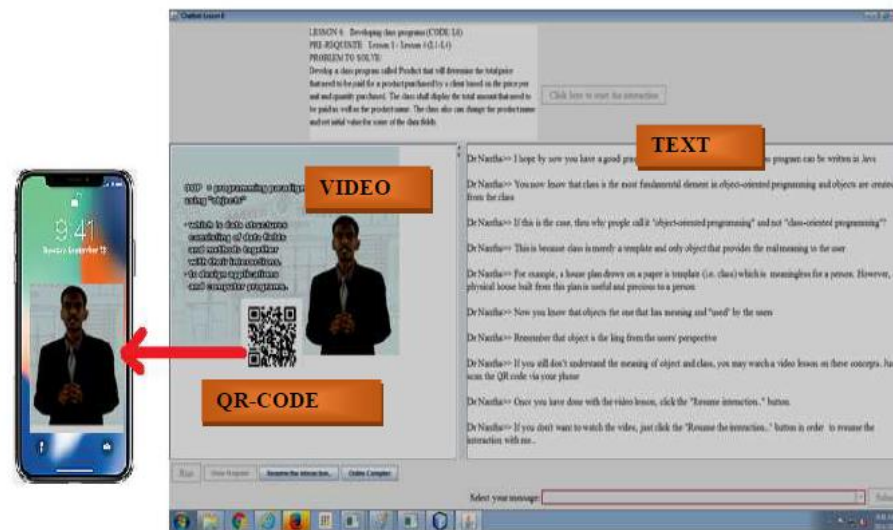


Figure 6 The media components used in the chatbot as viewed from the desktop

# Example of AI in Education

## Live experience: AR/VR

### Inquire: an intelligent textbook

Tap any biology term to see a quick **popup definition** and get a link to Inquire's detailed glossary.

**Highlighting** is quick and easy, and each highlight serves as the anchor for a notecard and a list of related questions.

Each highlight has a blue card with **suggested questions**, encouraging students to dig deeper into the material.

Write notes in the margin, making them easy to reference later.

**7.3 Passive transport is diffusion of a substance across a membrane with no energy investment**

Effects of Osmosis on Water Balance

Water Balance of Cells Without Walls

**diffusion**

The spontaneous movement of a substance down its concentration gradient, from a region where it is more concentrated to a region where it is less concentrated.

read more

motion is **diffusion, the movement of molecules of any substance so that they spread out evenly into the available space. Each molecule moves randomly, yet diffusion of a population of molecules may be directional.** To understand this process, let's imagine a synthetic membrane separating pure water from a solution of a dye in water. Study **Figure 7.13a** carefully to appreciate how **diffusion would result in both solutions**

**FIGURE 7.13** The diffusion of solutes across a synthetic membrane.

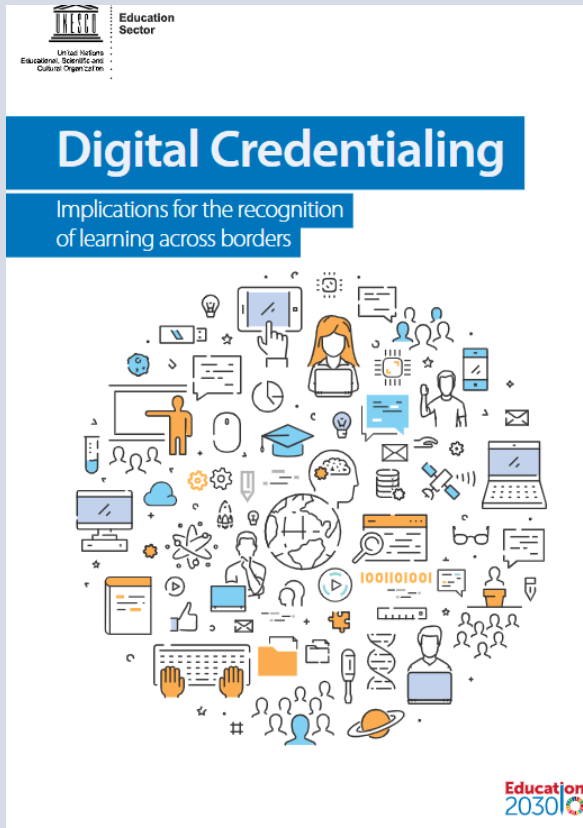
What diffuses hydrated ions along/across biomembranes? What are the differences between an ion and a molecule? What do gated Channels diffuse to aqueous solutions? What diffuses polar molecules along/across plasma membrane?

NOTES QUERIES

Each substance diffuses down its own concentration gradient

Source:  
<http://inquireproject.com>





# Assessment

- Badges & micro-credentials
- Recognition of prior learning
- Transnational qualifications frameworks for mobility
- On-demand examination
- Authentic, project-based assessment

<https://unesdoc.unesco.org/ark:/48223/pf0000264428?posInSet=4&queryId=N-e4559bf5-0bec-40c7-91a9-5cdea42e1ca4>



# 3. Possible Future



## Trends

At the current rate there will be larger and more frequent climate related disasters

Source: The Commonwealth Secretariat. 'Climate Change'. <https://thecommonwealth.org/climate-change>

Globally, the number of climate disasters has tripled since 1980, while, hot weather in 2016 broke the historic record set in 2015

This Photo by Unknown Author is licensed under [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/)





## Cyclone Idai Mozambique

Source: CARE; Retrieved from <https://www.care.org/emergencies/cyclone-idai>

Classrooms affected:

# 3,504

Students affected:

# 335,132

Source: UNICEF, 2019. <https://www.unicef.org/mozambique/en/cyclone-idai-and-kenneth>

## Devastated numerous schools on Grand Bahama and Abacos Islands



## Hurricane Dorian The Bahamas

# The impact of the climate crisis on education



Infrastructural damage



Damage to resource and materials



Loss of data and records



Collapse of systems = Out of school youth

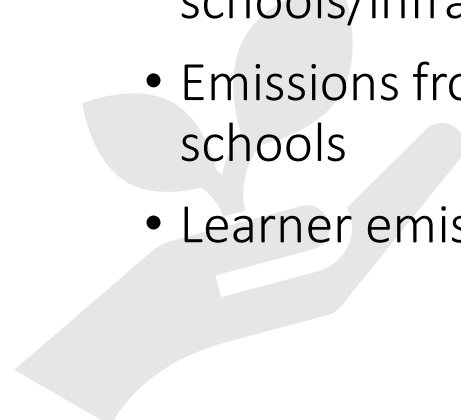
# Education and emissions

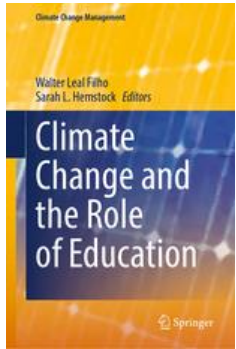
## Direct

- Emissions from construction of schools/infrastructure
- Emissions from energy use in schools
- Learner emissions

## Indirect

- Emissions from 'development' and economic growth associated with higher levels of education in a country





# Research on Emissions and ODL



3x less carbon emissions



Travel – greatest contributor

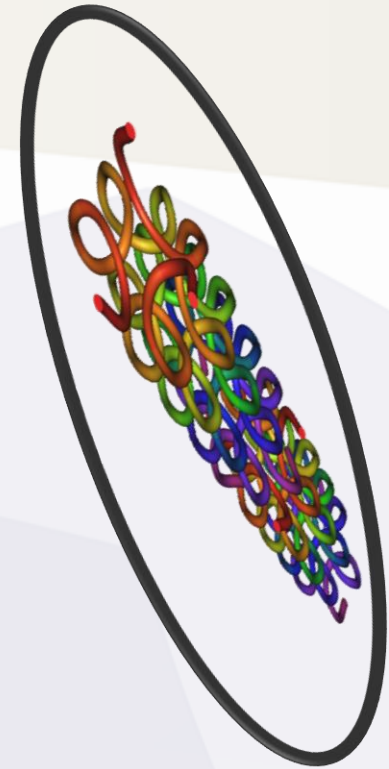


Mode of delivery - determinant

The future we  
want

# 1. The future is blended

- Use of appropriate technologies to create more **blended learning** opportunities
- **Mobile Messaging** can foster development of new genre of learning management systems that can integrate **social media** and **Chatbots**
- Certification based on **Blockchains** and **Open Standards** will enable independent verification of learning to strengthen lifelong learning



Source:

[https://commons.wikimedia.org/wiki/File:1K6F\\_Crystal\\_Structure\\_Of\\_The\\_Collagen\\_Triple\\_Helix\\_Model\\_Pro-Gly103\\_04.png](https://commons.wikimedia.org/wiki/File:1K6F_Crystal_Structure_Of_The_Collagen_Triple_Helix_Model_Pro-Gly103_04.png)



## 2. Leaving no one behind





- For persons with disabilities
- Women and disadvantaged groups
- People in remote areas



Policy by [Nick Youngson](#) CC BY-SA 3.0 [Alpha Stock Images](#)

# 3. Lifelong learning for all

- Learning to learn online
- Creating an ecosystem for lifelong learning
- Providing just-in-time training for livelihoods

New Registered Users	2019	2020	Total
 coursera	8M	20M	65M
 edX	5M	8M	32M
 Future Learn	1.3M	4M	13.5M
 CLASS CENTRAL	350k	700k	2.2M

Source: <https://www.classcentral.com/report/mooc-stats-pandemic/>



## 4. Respecting the planet

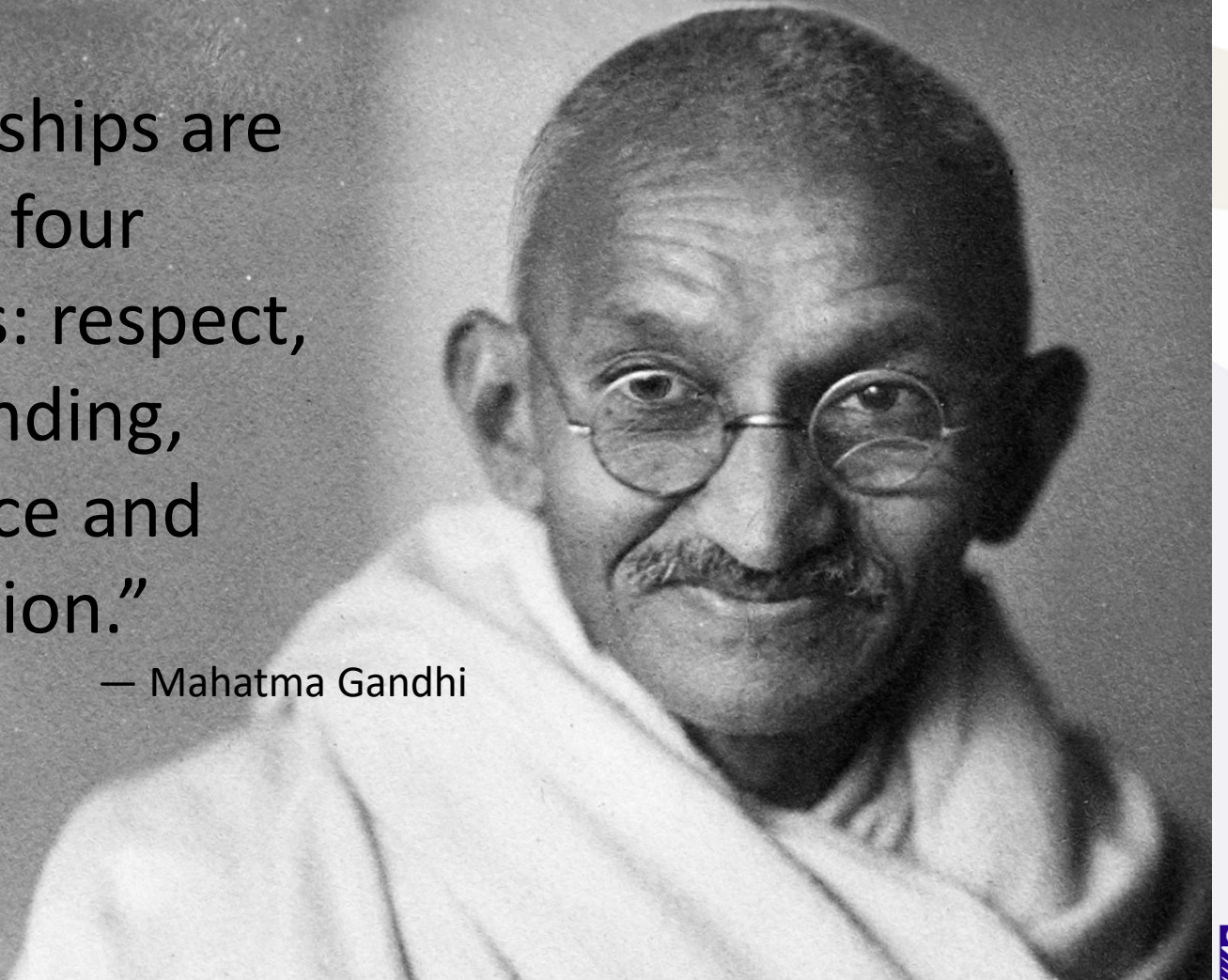
Community-based learning instills a sense of interdependence and responsibility which is crucial to behavioral change for environmental conservation.



# 5. Learning to live together

“Relationships are based on four principles: respect, understanding, acceptance and appreciation.”

— Mahatma Gandhi



# Transformation for a 'brave new world'

## Typical Approach:

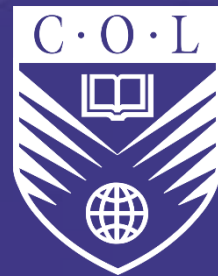
- Skills /Competencies
- Employability and Entrepreneurship
- Achievement



## Transformative Approach:

- Empowerment for Change
- Environmental Conservation and Global Citizenship
- Accomplishment

# Thank you



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