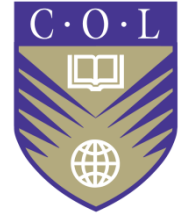


Digitisation as a Tool for Scaling Learning for Development



26 May 2026

Keynote Address: 4IR and Digitalisation: Catalysing Access, AI Literacy, Openness, and Innovation in ODeL
Unisa College of Education – Institute for Open and Distance Learning
Research Symposium

Dr Tony Mays
Director: Education, Commonwealth of Learning (COL)

Title slide

Good morning to you in southern Africa. Thank you for the invitation to speak at the Institute for Open and Distance Learning Research Symposium. I am Director: Education at the Commonwealth of Learning and based in our head office in Vancouver.

Slide 2: Commonwealth of Learning

For anyone present unfamiliar with COL, it is an Inter-Governmental Organisation (IGO) established by Commonwealth Heads of Government (CHOGM) in 1987 with a mission to increase access to educational opportunities by using ODL and appropriate technologies, so digitisation and digitalisation are central to our mission. Although our headquarters is based in Vancouver, we also have a regional centre in Delhi to support our work in India, and more widely in the Asian region.

Slide 3: Outline

This presentation has five parts. I will begin by addressing the question why digitisation and then proceed to the transition from digitisation to digitalisation and moving beyond numbers open educational practices to systemic change and capacity-building, and the growing role of AI in this process. Finally, I will share some thoughts about COL's forward thinking on this issue.

Slide 4: Why digitisation?

As we began to emerge from the Covid-19 pandemic shut down, the overwhelming feeling was that we should never again experience such disruption again to our education systems.

Commonwealth Education Ministers made the following commitment:

“We commit to building resilient education systems that can withstand future threats and disruptions. We seek to improve access to digital connectivity and skills to support teaching and learning, we pledge to ensure inclusion and equity, harness partnerships with the private sector and empower children and young people to shape the digital transformation of education in the Commonwealth.” Article 30, Ministerial Statement, CCEM, 2022.

Slide 5: COL response

COL argued that learning has a pivotal role in supporting a resilient society with direct correlations between educational investment and measures of social stability, productivity and peace. Recognising that quality learning is fundamental to addressing many of the challenges faced by Commonwealth members and others, COL argued the need to raise the priority of innovation in learning as a change agent. While spoken to by many countries, it was typically not prioritised on the agenda as a common need. COL argued it should be a future top priority - as it is essential to provide new digital learning services that will power the digital world that we already live in. COL argued that the digital divide would only worsen unless educational digitisation outpaced inevitable social and economic digitalisation. It was time to be bold, not fearful of digital change and speak with a common voice on Education – challenging our siloed formal learning systems to work together by co-creating resources, collaborating on policies and praxis and sharing success.

Slide 6: COL response contd.

COL has consistently advocated for digitisation to make education more resilient, demonstrating considerable success in supporting ministries of education during Covid-19 closures. COL observed that the UN has now recognised the importance of connectivity and digital equity for lifelong learning, and open education, with Heads of Governments committing to create ‘gateways to public digital learning’ and address the digital divide. COL agrees that this is a vital challenge, needing specific action. By leveraging digital tools and innovative educational models, we can ensure that women and girls have access to quality education and skills training, enabling them to participate fully in the economy and decision-making processes. For example, supported by the Government of Canada, COL has had a significant programme of work to empower women and girls in Africa and Asia, making open and flexible education community-

based and owned. Further, with an increasing challenge of disenfranchised boys who underperform and fail, dropping from the conventional system, it is important to support new ways for them to reconnect. COL advocates for expansion of these open, technology-driven inclusive education initiatives, ensuring that all learners, regardless of their background, gender or assumed abilities, can fully participate in and benefit from educational opportunities. Countries are keen to digitalise anyway, for economic benefit, for security and for improved communication. But for innovation in learning, increased digitisation is an essential pre-requisite for impact.

Slide 7: From digitisation to digitalisation

In a previous address to colleagues at Unisa, I referred to the then recently published *UNESCO Global Education Monitoring Report on Technology in Education* subtitled *A Tool on Whose Terms*. That report emphasised the risk that digitisation and digitalisation could exacerbate inequality due to lingering digital divides. Since then, COL has worked with UNESCO to develop a follow up report focused on the Pacific (UNESCO, 2024). While this later report echoes most of the challenges identified in the earlier report, what is particularly interesting about the later report is the myriad of ways in which Pacific Small Island Development States have innovated to address various challenges.

COL has argued, for example at a CCEM meeting in London in May 2024, that digital skills are one of the first pre-requisites for future learning. Digital skills, which are cross-cutting and draw on all other skills, largely describe the ability to access, manage, understand, integrate, communicate, evaluate, and create information safely and appropriately. Other skills, especially foundational skills related to literacy, numeracy, problem solving, communication, socio-emotional skills such as leadership, self-control, and relational skills, play a critical role in building and use of digital skills. With fast-paced technological changes taking place, digital skills have become important for youth and adults both (a) as independent skills aiding to the employment / enterprise potentials, and (b) as a means to access information / knowledge in all other subject areas and walks of life.

Digitalisation in education systems is an important precondition for the development of digital skills. This refers to the entire system of education delivery starting from policies to frameworks, networks (digital, institutional, and human) to toolkits and resources. Digitalisation in education, in combination with other appropriate and complementary measures, has the potential of making education more equitable and widespread, through cost-effective paths.

Digitalisation in education systems and development of digital skills are a precondition for developing resilient societies and economies that can use transformative technologies to equip learners with adaptable skills for a dynamic world and promote innovation.

Low- and Middle-Income Countries (LMICs) within the Commonwealth still face challenges in education, including the achievement of digitalisation. Governments are stretching financial resources to balance immediate needs (such as development of hybrid learning resources) with long-term goals (such as establishing a pipeline of high-quality teaching staff and globally competitive graduates). At a time when financial resources are already stretched, LMICs are seeing drops in donor funding, leaving governments with even fewer resources to address the education improvement, performance gaps, and student dropout.

There are significant challenges with digitalisation in emerging economies, including: infrastructure, access to technology, digital literacy, cost, regulatory environment, language and content, cybersecurity and privacy concerns, cultural and societal factors, economic disparities, and political instability. At the same time, there are significant general benefits, such as access to information, financial inclusion, efficiency and productivity, economic growth, healthcare access, education and skills development, government services, disaster preparedness and response, environmental sustainability, and social connectivity. Specifically, within education, digitalisation can offer opportunities for the development of quality educational resources (whether those are accessed digitally or in print), enhanced teacher support, flexible learning options and increased access to education (particularly for university students, and lifelong learners), collaborative learning opportunities, and preparation for the future workforce as well as enhanced innovation, competitiveness, and creativity.

Slide 8: Recent Developments: Pacific

As reported in Mays et al. (2021), following campus closures due to the Covid-19 pandemic, many Ministries of Education around the world requested teachers to move their teaching online. The Commonwealth of Learning responded to requests from two countries to provide support in pedagogical and curricular change for online learning in this process. A Massive Open Online Course (MOOC) platform was used to upskill 11,568 teachers in two regions of the Commonwealth, including about 40% of the entire teaching force in one country. Analytics from within the course, together with pre-, mid- and end- course surveys of participants' perceptions indicated that while there was scope for improvement, the short course largely reached its objective of providing immediate support on an introductory level and that the approach adopted was largely appropriate for the purpose. The MOOC was conceptualised over one weekend and then began to be offered from the following weekend, with the next module being developed

while one module was being facilitated. It would not have been possible to reach so many teachers so quickly using traditional print-based and in-person workshop approaches.

Subsequently, COL received funding support from the Ministry of Foreign Affairs and Trade in New Zealand to scale capacity-building in the region and developed a series of follow up digital short courses addressing different aspects of ODL provision identified with COL's focal points in Ministries in the region, reaching some 7,300 additional teachers. These courses do not require any login for access, only for certification, and have been repackaged and reused not only in the Pacific region but also in other parts of the Commonwealth, a practice enabled by the digital nature of the content and marking a transition from open educational resources to open educational practices.

Slide 9: From digitisation to digitalisation – the case of open schooling

Many countries have been unable to build enough secondary schools and adequately employ enough secondary school teachers to accommodate all the learners exiting primary school or dropping out somewhere along the way.

The scale of the challenge makes clear that it can be addressed **only** through expanding open and distance learning (ODL):

- 1.6 billion learners in more than 190 countries had their schooling disrupted by the Covid-19 pandemic (UNESCO, 2021); not all came back.
- According to the World Bank (2026a), reporting UIS data, the Gross Enrolment Ratio at the secondary level was still only 77 per cent in 2024; and
- According to the World Bank (2026b), reporting ILO data, an estimated 19.8 per cent of young people were not in employment, education or training in 2025.2026

In a recent report entitled, *The Price of Inaction*, UNESCO (2024) estimated the global cost of inadequate access to schooling and school drop-out rate at a staggering USD 10,000 trillion annually. The report indicated that 128 million boys and 122 million girls were excluded from schooling. However, a more recent post by Global Partnership for Education (GPE, 2025) indicates that the total has now been revised upwards to 272 million. As noted, in addition to out-of-school children, in most countries there are large and growing numbers of young people who are not in employment nor in education and training. And this is especially so in the less economically developed regions of the world.

Managing the Covid-19 pandemic required limitation of travel and observance of physical distancing guidelines. This meant finding alternative ways to ensure school learning could continue without requiring teachers and learners always to be in the same space at the same time.

This resulted in a move into distance and online learning provision in the form of emergency remote teaching. It is possible to reach even very remote learners via open and distance learning (ODL). ODL has been used in the past to reach children from the Australian outback to the Canadian prairies and currently supports millions of learners in Southern Asia and Sub-Saharan Africa.

Developing approaches for more flexible provision of schooling opportunities in this way, can also help to meet the needs of learners who have been unable to access schooling; who are in school but are not learning effectively; who have dropped out of school; or who need a second opportunity to improve their schooling outcomes in order to access employment or further education and training opportunities. Responding effectively to a short-term crisis like a pandemic can therefore help to develop more flexible and resilient approaches for the long term, as illustrated in Figure 1.

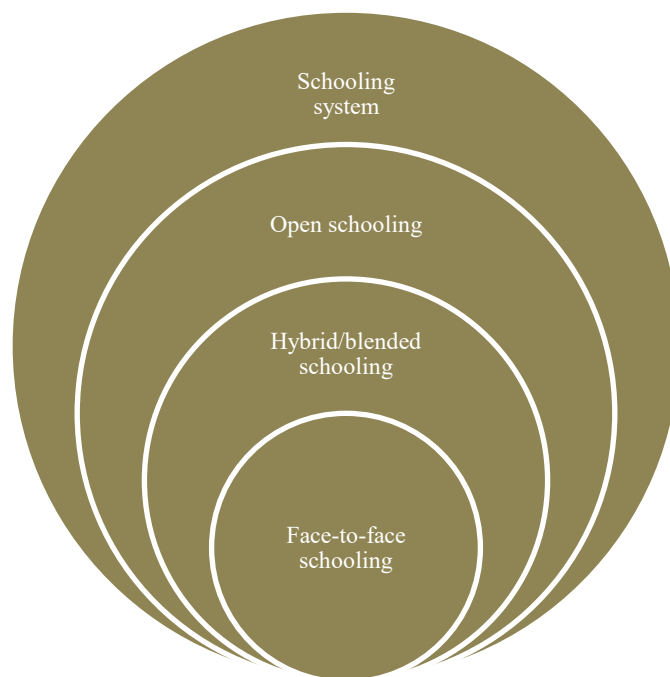


Figure 1: A resilient schooling sub-system

As illustrated in Figure 1, face-to-face schooling remains at the heart of the schooling system and is probably the preferred option for very young learners as well as learners with special educational needs which parents/caregivers may not be equipped to address. However, hybrid (some face-to-face, some distance, some online, some broadcasting) and blended (face-to-face and online) could conceivably become the norm for older learners. For learners unable to get to a physical school, or not regularly, an open schooling approach is necessary. It is possible that

learners could move between models at need, for example learners attending face-to-face schooling who encounter certain barriers (e.g. falling ill), might continue learning from home through distance learning; learners struggling with some subjects through open and distance learning might be integrated for a time into more structured blended or face-to-face learning.

Younger children benefit from the socialisation that face-to-face contact provides but older children could probably be expected to work in a more blended manner. However, it is necessary to upskill and support parents/caregivers and teachers appropriately.

ODL can be particularly useful as a means for both accessing and supporting education when traditional face-to-face schooling is not possible. However, it can also be used to augment face-to-face schooling for children who are disengaged (Jha, 2025), or struggling, or whose physical school cannot offer one or more subjects which the learner is interested to study.

Open schooling can also support the needs of learners with disabilities, whether through stand-alone offerings or in parallel blended face-to-face schooling and open schooling models. The resource-based nature of open schooling, coupled with the relative anonymity of online learning, may contribute to a more conducive learning environment for some learners, if the course and its materials and support systems are designed appropriately.

There are many different models that can be employed to enable open schooling, ranging from stand-alone open schools to expanded use of current schools for use by non-traditional learners outside of school hours. Examples of successful open schooling models can be found in diverse contexts such as Botswana, Canada, India, Namibia, New Zealand and many other countries (Mays & Singh, 2020; Mays & Siafu, 2025).

Countries which already had established open schools (for example the National Institute of Open Schooling in India¹, the Namibian College of Open Learning², the British Columbia Open School³ in Canada, and Te Kura⁴ in New Zealand) were able to leverage these existing resources in support strategies for disrupted campus-based provision during the Covid-19 pandemic.

However, in many contexts, open schooling is **not** an established practice and may even be dismissed by the traditional establishment. Nonetheless, it would seem possible to explore ways to maximise the potential of **both** the traditional bricks-and-mortar school systems and the new

¹ <https://www.nios.ac.in/>

² <https://www.namcol.edu.na/>

³ <https://www.openschool.bc.ca/>

⁴ <https://www.tekura.school.nz/>

possibilities afforded by technology through blended, flexible and/or flipped classroom approaches.

Currently, much open schooling in developing economies still takes the form of after-hours classes at day-schools. In these models, provision is impacted by campus closures in the same way as for the day school provision. COL's Open Schooling (OS) initiative is helping these kinds of providers to work towards the use of digital OER accessible on mobile devices. This serves to overcome the costs of buying and distributing printed materials. However, high Internet costs, and irregular Internet access and power supply, have meant that a centre-based model is still needed in many communities to enable students to download digital content. The COL OS initiative then advocates the use of mobile forms of communications such as individual and group calls, bulk SMS and social media using text or voice messages, which require less data usage and can help to reduce the need for physical contact. There is also a resurgence of interest in the use of broadcast media such as radio and television. (COL, 2020)

Slide 10: The case of FODE, PNG

The Commonwealth of Learning (COL) is working with Papua New Guinea's Flexible Open and Distance Education (FODE) system to help scale a digital open schooling model for Grades 7–12. Following a successful pilot and independent evaluation in 2024, COL is assisting FODE in implementing a national Technology-Enabled Learning and Open Educational Resources (TEL/OER) policy and rollout strategy for the period 2025–2028.

FODE currently supports between 90,000 and 100,000 learners using a print-based and contact-supported model, but they do not have access to industrial scale printing technology like Unisa, and so do not enjoy the benefits of scale that that enables. The cost of paper, ink, manual collation and packing, storing and distributing are all rising, and there are still learners that cannot easily be reached by this model anyway.

The project aims to reduce reliance on printed materials, enhance learner engagement, and improve cost efficiency. A hybrid model will launch in late 2025-6, starting with digitised content for Grades 11 and 12, and expanding to Grades 9–10 and eventually Grades 7–8 by 2027.

COL supported FODE in developing digital open schooling content for Grades 11 and 12 using a Moodle platform as a first step. A mini-pilot of the Grade 11 content received positive feedback from students and teachers. Following an independent evaluation of the support provided by COL to date in 2024, COL offered further support to the FODE team to finalise a technology-enabled learning and open education resources policy and related implementation strategy for the

period 2025-2028, as well as a student engagement and support handbook for FODE online learners.

The Implementation Strategy operationalises the Technology-Enabled Learning and Open Educational Resources (TEL/OER) Policy, aiming to transform FODE into a national leader in flexible, equitable education. Aligned with Papua New Guinea’s National Education Plan 2020–2029 and Sustainable Development Goal 4 (SDG4), it leverages technology and open educational resources to overcome barriers, enhance teaching, and ensure sustainable learning opportunities for all.

FODE plans to “deliver equitable, high-quality education to Grades 9-12 via a hybrid TEL/OER system, reduce costs by 30 per cent, and position itself as a model for distance education, with plans subsequently to extend to Grades 7-8.”

For existing open schooling providers seeking to change their models of provision, there is need for a gradual process to build staff capacity, update policies and procedures, build systems, onboard students, pilot, evaluate and scale, possibly with the help of other external partners. However, for long-term sustainability, the new models of provision need to be integrated into the national budget. In the interim, staff will need to manage multiple models of provision, which will likely mean the need to recruit more support.

Slide 11: Lessons from Africa

In Africa, COL works frequently with classroom teachers whose experience has been centred on in-person provision according to a set timetable, an authorised curriculum and an approved textbook. It requires a lot of support to help such teachers develop interactive digital content to support their classroom teaching and/or to branch into blended and online provision for learners unable or unwilling to access in-person education.

We typically need to start with an in-person workshop covering issues such as Curriculum mapping, ODL design, OER, Inclusion (including gender), Assessment and Learner Support. The photograph shows teachers and Ministry officials in The Gambia in one such workshop.

This initial in-person training will then be followed by further online support and feedback processes, usually over a period of several months.

COL has also developed several online courses to support this kind of engagement, one example being the micro-courses available at COLcommons (<https://colcommons.org/>).

For sustainability, it is necessary to locate such capacity-building within an appropriate business model.

Slide 12: Beyond Numbers

The Beyond Numbers Project, led by the Commonwealth of Learning (COL) in partnership with the Africa Federation of Teaching Regulatory Authorities (AFTRA), aimed to expand the pool of qualified teachers in Sub-Saharan Africa (SSA) through open and distance learning (ODL) and digital technologies. In response to the region's urgent need for 15 million new teachers by 2030, the project brought together four teacher regulatory authorities—the Botswana Teaching Professionals Council, the Teachers Registration Council of Nigeria (Nigeria), the Teachers Council of Seychelles (Seychelles), and the South African Council for Educators (South Africa)—alongside Botswana Open University and University of Abuja. Each authority developed a draft national ODL framework, curated digital literacy micro-courses, and aligned recommendations with global standards such as UNESCO's ICT and AI competency frameworks. More than 1,500 educators and ministry staff, 66% of them women, were trained using 13 micro-courses and 5 CPD courses, tailored to local needs. The project fostered peer-led development, teacher ownership, and school-based dialogues, making CPD flexible and teacher-centred. Collaborative tools enabled educators to contribute to national frameworks, encouraging deeper engagement. Though limited in scale and duration, the pilot demonstrated the effectiveness of ODL in teacher development. It laid the foundation for harmonised regional standards and showed strong potential for scaling across Africa and other Commonwealth countries.

COL and AFTRA have subsequently worked to scale such quality teacher development in sub-Saharan Africa through ODL. As part of this initiative, COL supports Ministries of Education and teacher education institutions in developing national ODL frameworks and co-creating digital literacy modules for teachers. The initiative also promotes the development of teachers' digital competencies aligned with international standards, including UNESCO's ICT and AI Competency Frameworks for Teachers. Key focus areas include the integration of virtual labs in STEAM education and the adoption of AI in teacher education and professional development.

Most recently, the AFTRA 13th Conference and 15th Roundtable, held in Gaborone, Botswana from 04 to 09 May 2026 under the theme “Recasting Teaching as a Collaborative Profession: Implications for Africa,” provided a key platform to showcase project achievements, exchange best practices, and enhance awareness of COL's teacher education models across Sub-Saharan Africa. Working with regional bodies to enhance collaboration and shared resources and learning is being applied in COL's teacher education work more broadly.

Slide 13: Addressing the digital divide

Most of COL's partners use Moodle as their preferred LMS, although of course there are a wide variety of possible options. Mindful of the lingering digital divides, COL OS has supported the export to PDF option in Moodle, using a "Moodle³" approach: phase 1 develop content with text and graphics only that can be exported to print if necessary or downloaded at a Wi-Fi-enabled centre even to low-end devices; phase 2 supplement with optional independent complementary video and animation for learners with higher end devices or who can sometimes visit a learning centre; phase 3 integrate multimedia and H5P for interactive blended and online provision.

Slide 14: AI and OER: Teacher in the Loop AI (TiL-AI)

Artificial intelligence (AI) is rapidly transforming various sectors, including education. One of the most promising applications of AI in education is in the development and adaptation of Open Educational Resources (OER). COL's Teacher-in the-Loop (TiL-AI) initiative empowers teachers and TVET trainers across the Commonwealth to leverage generative AI (GenAI) in adapting OER to fit national and local curricula, ensuring relevance and cultural resonance. Synergising the power of GenAI with the teacher's role, we can improve the quality of AI-generated content and empower teachers with a deeper understanding of both AI and OER and their combined potential in education. Balaji et al. 2025, reported on the first phase of the project. In the higher education space, COL has also been exploring ways in which institutions can localise digital content shared as OER with several reports in process.

Slide 15: Human-in-the-Loop

Teachers and students will make use of free or low-cost AI tools whether we want them to or not. We therefore need to be alert to ways in which over-reliance on AI tools can undermine metacognitive processes, this is an extension of the ways in which we already use LMS data analytics to alert us to disengagement (Dizon et al., 2026). Where teachers are concerned, it seems logical to link expectations to professional experience (Kasepalu et al. 2026): the extent to which teachers can explain how they have used the information that has been collated by the AI tools they have used, what they accepted, what they rejected and how they adapted the information for use in their context of practice should logically improve with experience. We should follow through the same process ourselves when making decisions at a systemic level about what AI tools to integrate into our practice and for what purposes (Rienties et al., 2026). The key is always to be clear about the role and benefits to the humans in the loop and working towards a long-term goal that is human-centred, balances economic growth while addressing social issue and integrates cyber and physical spaces (Government of Japan, 2021).

Slide 16: Sources of inspiration

It is difficult to keep pace of all the exciting and innovative things people are doing with technology in the move towards digitation of the curriculum and digitalisation of the system. Here are a few of the newsfeeds I subscribe to in this respect ...

Slide 17: Andrew Ng

Andrew Ng is one of the people I follow. He recently commented on the decision by Harvard to limit the number of A grades given to undergraduate classes ... the implication being that access to AI tools has contributed to the higher achievement. He argues:

“I believe in letting — and even encouraging — someone to redo something until they succeed. This is as opposed to standing in judgement of the fact they didn’t get it right the first time. Also, I believe homework assignments should be designed primarily to help people practice and learn, rather than to judge their skill level. This is why I prefer to create “Practice Problems” — questions that, when you think through them, help you to gain practice and reinforce what you know. As opposed to “Assessment Problems” designed primarily to judge skill.” (Ng, 2026).

I am with Ng on this. In the real world, we use whatever tools are available to address a challenge or problem – we should set authentic tasks which we assess authentically ... and oftentimes continuous improvement is more useful than either a good memory or delayed perfection!

Slide 18: Future prospects: Frugal AI

Cheng (2026) argues, for COL, that AI is here to stay and so we need to think about how best to use it considering issues such as efficiency, control and local ownership.

In COL’s Frugal AI Strategic Framework:

“Frugal AI builds long-term institutional strength and capacity. To achieve sustainable digital transformation, we focus on three pillars of sovereignty:

- ***Sovereign Data Ownership***: We keep education data under local jurisdiction. By implementing privacy controls that anonymise student details *before* AI processing, we protect learners and institutions while retaining sovereign control over personal, institutional or national datasets.
- ***Economic Resilience***: We reduce dependency on foreign vendors and unpredictable licensing fees by prioritising open-source components and local infrastructure.
- ***Local Expertise***: We move beyond permanent reliance on external support. Through partnerships between ministries, universities, and teacher education institutions, countries build their own technical capacity from the ground up.” (Cheng, 2026).

Slide 19: References

There are quite a few active links that might be useful when you get a copy of this presentation. I am very open to further discussions about these issues after the event. Thank you to the organisers for making it possible for me to make a contribution and thank you to you for listening.

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