COMMONWEALTH of LEARNING

POLICY BRIEF:

Leveraging MOOCs for Teacher Development in Low-Income Countries and Disadvantaged Regions

The Commonwealth of Learning (COL) is an intergovernmental organisation created by Commonwealth Heads of Government to promote the development and sharing of open learning and distance education knowledge, resources and technologies.

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Overview

This policy brief looks at open digital distance learning and the potential of massive open online courses (MOOCs) to deliver and support teacher development in low-income countries and disadvantaged regions.

It examines the need to address the particular barriers and challenges faced by teachers and their communities in these areas and looks at options that do not increase their disadvantages.

The brief was conceptualised and drafted in the midst of the global pandemic and written on the assumption that policymakers will have to work within the pressures and constraints of the pandemic for the foreseeable future.

The pandemic, its successive waves, the responses to these successive waves and the aftermath of these waves and responses mean that for the foreseeable future — in different places and in different ways — any "new normal" will not resemble the "old normal." The pandemic is not a "blip" or a perturbation but a profound disruption to the world order, its economies, its societies and its systems. This will problematise the purpose and role of education, if only by reconfiguring the employment markets that education systems serve and the tax base with which governments finance these education systems.

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Thus, there are consequences for teacher development, firstly in recognising that the widespread "pivot" to remote digital learning will have changed the experiences and expectations of learners and teachers, and secondly in recognising that the curriculum must respond to altered economic conditions and configurations, to changes in livelihoods and communities, and to the longer-term effects of trauma, bereavement, hospitalisation, vaccination and the psychological and social consequences of lockdown, social distancing, furlough and masking, among other factors.

The pandemic has drawn attention to the disparities and disadvantages inside and outside education systems globally and to responses that might address these through policy, pedagogy and technology. This brief was drafted in the expectation that the waves of the pandemic will hit low-income countries and disadvantaged regions particularly hard but also in the expectation that digital and educational responses to these waves, if generalised and undifferentiated, will increase the disadvantage of these areas, their teachers and their schools. This will be particularly true if these responses are not targeted and calibrated specifically for these countries and regions, especially their communities at the margins of national, mainstream norms.

This policy brief complements and draws on a longer companion report, *MOOCs for Teacher Development in Low-Income Countries and Disadvantaged Regions*, which looks at the technological and pedagogic dimensions of all these topics in greater detail. It recognises that local and national policymakers have only limited freedom of choice in how they can allocate resources, assign personnel or change priorities. There is always a need to back up such recommendations with evidence and data and to align recommendations to existing national strategies, capacities, institutions and sentiments. Freedom of choice at national and local levels can also be limited, constrained or skewed by the preferences and resources

of the international donor community, global agencies, development ministries, global corporations' charities and foundations, and academic institutions. This can mean that the available policy options for policymakers are relatively few and not always helpful or benign.

To ensure that MOOCs being offered speak to the real needs of the people who will use them, it is important that a collaborative process be followed during design and development, that consideration be given to using local/regional mentors or facilitators who can help guide discussions that link to local or regional issues, and that there be a feedback loop from post-course evaluations into revisions for subsequent iterations.
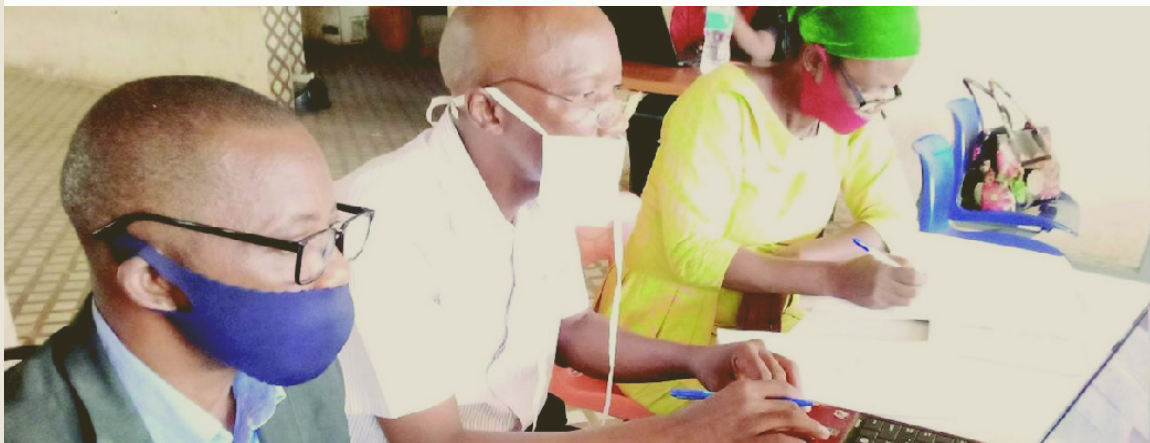
Addressing Challenges to Online Teacher Development in Low-Income Countries

This section discusses the challenges to teacher development in low-income countries and disadvantaged regions and some of the ways in which they can be addressed. It sets out a range of pedagogic and technological options intended to transform globally delivered web-based courses into more nationally, culturally and regionally appropriate courses able to reach different communities and encourage teachers to be more confident, active, creative, critical and social lifelong learners. There are various points at which policymakers can intervene, depending on their respective roles and responsibilities.

Infrastructure and other physical challenges

The most frequently cited challenges will always be physical and objective ones, such as the sparsity and remoteness of some populations, and the state of infrastructure such as secure buildings, mains electricity, network coverage, postal services and public transport. The assumption is often made that financing — either commercial, governmental or international — will meet these challenges and all the problems will solved. Most likely, if all these physical and objective challenges are overcome, the more subtle, soft and subjective challenges will become apparent, namely those of values, language, culture and tradition, and, of course, of human and organisational capacity and commitment.

Dissonance with local values, language and culture

Teacher development will be most effective and sustainable if it is aligned to the values, language, culture and traditions of a community, especially if the teacher development response comes from within that community. This avoids any sense of oppression or imposition, or any dissonance between the worlds inside and outside education, and inside and outside the community. The pedagogic and technological options and recommendations in this brief focus on options based on this principle. The role of policymakers should be to create the structures, resources, priorities and incentives to facilitate these outcomes, based on dialogue and discussion.

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Interdepartmental policy stratification

One of the policymaking challenges involved in improving teacher development will be that comprehensive and integrated solutions depend on (i) the co-operation and collaboration of several ministries or agencies spanning not only education but also economy, social welfare, telecoms and regional development, and (ii) shared priorities that combine these roles and responsibilities. As an example, extensionists from a ministry of agriculture already have a role in the rural areas of some countries. They are a human resource that could be shared for teacher development to ensure these areas are not left behind or further disadvantaged.

Addressing diversity

Not all disadvantaged communities are physically distinct or geographically located; they may be dispersed across the wider population, or they may be hidden from or invisible to the wider population. This might include refugees and internally displaced persons in camps,

people with mobility, cognitive or physiological challenges, scheduled castes, or nomadic and itinerant peoples, especially if they are stigmatised by the wider host population.

Disadvantaged communities may also, to a greater or lesser extent, be disenfranchised and unrepresented or underrepresented in the local and national political processes and thus need specific access and advocacy from policymakers.

While none of these are peculiar to low-income countries or disadvantaged regions, their problems in these places will be greater. Policymakers should consider widening and reinforcing inclusive education through appropriate teacher development and exploiting external resources such as those available online from the Commonwealth of Learning (COL) and other agencies. Also, teaching in some areas or with some communities may not be a prestige posting for teachers. This is an issue that policymakers could address and that teacher development could support.

Underrepresentation of women and girls

The education of women and girls is a particular challenge in some traditional or conservative communities, and teacher development has a part to play in developing teaching capacity within those communities rather than importing it from outside.

The COL Teacher Network for Girls Education project (also known as TEN-G) supports teacher mentors in marginalised communities to adapt COL MOOCs and other OER training materials and offer these to female teachers through on-site training and other blended learning opportunities. From this training, the teachers are also able not only to develop podcasts that are subsequently aired to learners via local radio stations but also to adapt and share other existing OER in their teacher communities.

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Teacher development could, therefore, aim to combine, collate and curate external resources, including COL MOOCs, with local resources from within communities of women and girls, and address the particular problems of access and discussion — perhaps with an emphasis on personal mobile phones.

The Technological and Pedagogic Options

Whereas several reports, including the forthcoming *MOOCs for Teacher Development in Low-Income Countries and Disadvantaged Regions* address technological and pedagogic options, the focus of this brief is policymakers, not pedagogues or technologists. In both cases, the overriding concern is human capacity.

Adapting or repurposing existing techniques and technologies

Teacher development will undoubtedly benefit from greater flexibility, richness and diversity in both the pedagogies being deployed and the technologies being used. This will be especially true for teachers in low-income countries and disadvantaged regions, since conditions there are more likely to diverge from those in mainstream areas. This brief focuses on adapting or repurposing existing techniques and technologies, and on exploiting existing ownership and familiarity. These actions are founded upon empowering local pedagogic and technological expertise to experiment, adapt and appropriate, with the implied permission to make mistakes, make improvements, build better each time and build communities.

Promoting an open and tolerant attitude to pedagogies and technologies

In looking at various innovative and emerging pedagogies, this is where policymakers can add value to global resources such as the COL MOOCs, by promoting an open and tolerant attitude to pedagogies and technologies rather than prescribing and enforcing specific applications, formats and systems. Locking down laptop and desktop computers

and enforcing adherence to specific vendors, networks, computers and applications can trap teachers several upgrades behind the digital world outside and risk losing the chance to build sustainable, cost-effective teacher development based on the teachers' own devices and preferences and those of their learners and colleagues, and on familiarity with the digital world outside education systems.

Complementing global digital formats like MOOCs

The pandemic has led to a global pivot to digital learning as education systems rush to deliver education remotely. This has been driven by the need to maintain the continuity of education systems but has sometimes led to educationally and technically cautious and conservative responses based on methods already in use, often focused on content delivery and failing to offer other aspects of a rounded pedagogy — for example, discussion and sufficient pastoral, tutorial, cultural or individual support.

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Various approaches are possible that exploit the familiarity, acceptability and availability of specific technologies that support pedagogies able to address these deficiencies and omissions. Such approaches would enable teacher development that complements global digital formats such as the COL MOOCs with ideas enabling greater richness, sustainability and specificity. These methods are all based on emerging expertise and experience but would nevertheless build and empower local capacity.

Educating users on legal liability

Issues around legal liability are sometimes a concern when accepting or authorising the use of social media, personal devices and unregulated software. While laws vary from country to country, it is usually the case in the Commonwealth that common sense prevails, and that the law recognises policymakers cannot predict or control for every eventuality. Users are considered to be adults, and in the event of unforeseen situations, prompt action, proportionate responses and careful revisions are typically regarded as adequate. Teachers are professionals and are, in any case, educating their students to enter a digital world that is not always orderly or benign.

Encouraging sustainable models using own devices

While looking at components and examples of technological options, the focus should be on those technologies most likely to be robust, cheap and proven. This inevitably puts personal mobile phones and all the Web 2.0 functions and apps at the top of any list of options. It also forces policymakers to consult widely to assemble the most acceptable and sustainable system that constructively combines external resources, including COL MOOCs, with personal mobile phones and with community or institutional hardware and infrastructure in ways that best meet local teachers' needs, especially those in hard-to-reach disadvantaged regions.

Empowering through local networks and incentives

The hope is that local expert teaching and technical personnel can work together, perhaps with the teachers in the programme themselves, to adapt and assess these suggestions and options, embedding them more firmly and sustainably in the profession and its cadres.

External resources, such as the COL MOOCs, and peer group communities of practice can only achieve so much. Policymakers can create the structures and incentives that move teachers from what they have discussed and learnt to do, to what they are empowered and emboldened to do.

Supporting local models and theories of change

There can, however, sometimes be a problem within the teaching profession that newly qualified teachers are the most familiar with innovative ideas and practices but least empowered to attempt actual innovation. Policymakers could recognise within the profession and within the sector what factors promote change and what factors inhibit change, and consciously articulate a "theory of change" that brings about the desired improvements.

The responsibility for policymakers, once successful innovation or adaptation has been demonstrated, is to consolidate and embed it.

One example that relates to both technological and pedagogic change is the "concerns-based adoption model." This sees the barriers to change not as lack of skills, lack of knowledge or lack of competencies but as private and personal concerns about adequacy, status, self-esteem, embarrassment and fear of failure.

Clearly such concerns are specific to individual cultures and communities, but they illustrate a role for all policymakers seeking to promote change — for example, signalling that failure is inevitable in change, experimentation and innovation, and that failure is the opportunity to learn and improve, definitely not something to be hidden, penalised or disguised. The responsibility for policymakers, once successful innovation or adaptation has been demonstrated, is to consolidate and embed it.

Recommendations

These are specifically formulated for a policy readership. The full companion report has pedagogic and technological options and recommendations. The policy recommendations are intended to form the structure around these.

Local and national policy

Teacher development can be supported by international and global resources, in this case by the COL programme of courses delivered digitally as MOOCs. Policymakers should address potential limitations while exploiting the gains that are possible in the local contexts.

Prioritise infrastructure needs for hard-to-reach communities

Teachers in hard-to-reach communities are probably all different and diverse, even within one country or region. For each of them, specific policies and resources are necessary around infrastructure, connectivity, access and meeting spaces, and perhaps around shared or extended access to existing resources such as school computer labs or village Internet cafés, as well as improved social, educational or community requirements for network licensing.

Policymakers need to exercise caution about donations, being aware of the possible consequences of accepting apparently attractive offers of hardware, software and systems. Instead, the focus should be on technologies that are easily accessible for teachers, including on their own devices.

Develop resources in local languages and technologies

Global resources will not align well to local languages, cultures, environments and experiences, or indeed to local curricula, teaching practices, labour markets and education systems. To achieve effective local teacher development using global resources, it might be possible to set up groups that meet online or face-to-face, organised around

specific interests, sectors or projects; these groups would encourage the development of local language resources, blogs, OER and podcasts, compare local observations, outcomes and experiences, and collate, critique and curate global online resources. Such groups would clearly be more effective and viable if local co-ordination and support were made available.

Devolve decision making on teacher development

In addition, the global pandemic has increased the need for rapid and local responses as successive waves hit areas and as local services, resources and personnel become fragmented, stretched and stressed in terms of management. This suggests the need for policymakers to support the devolution and delegation of decision-making to lower local levels, and for a more responsive and flexible organisational ethos, perhaps based on the principles of "agile methodologies" (https://hbr.org/2016/05/embracing-agile).

Adapt global MOOCs for school-based activities

Policymakers should enable local teacher communities of practice to access, exploit and build on global resources, such as the COL MOOCs. They could do this by providing access to school and community Wi-Fi, meeting spaces, transport and refreshments, encouraging weekly professional study time, and contributing to expenses such as airtime. Policymakers should support any locally developed materials and school-based projects based on the COL MOOCs that can be shared with other teachers and fed back into local schools, and should support dialogue with community leaders, using local community members to help understand their situations and challenges.

Encourage small-scale trials in disadvantaged communities

Finally, policymakers should recognise their involvement in local and school-based activities as a factor in promotion and professional advancement, support small-scale trials amongst the most disadvantaged, and measure evidence of engagement impact uptake. They should recognise that outcomes will not always appear to be as good as baselines for medium-income countries and more advantaged regions.

International global policy

Recognise diversity, difference and distance

Teacher development can be supported globally and internationally by the provision of open online resources such as the COL MOOCs, and of funding, advocacy, resources and support, as already happens. But this can be done with perhaps a greater sensitivity to the diversity, difference and distance of many low-income countries and disadvantaged regions in relation to the norms and standards of the global digital and anglophone North.

Policymakers are often at the interface between funders, donors and treasuries on the one hand and the delivery of services and strategy on the other, with the development of policy where these two forces engage. This suggests that policymakers could highlight the needs of their respective low-income countries and disadvantaged regions in ways that perhaps gently move funder, donor and treasury aims and expectations away from the overriding and unconditional emphasis on scale, cost-effectiveness and sustainability — priorities that work against smaller diverse communities beyond the national mainstream.

Develop alternative metrics

Support for disadvantaged regions should be matched by the development of appropriate alternative metrics, SMART objectives and key performance indicators (KPIs) by which to monitor and report more nuanced policies back to funders, donors and treasuries. "Number of teachers trained" may need to be balanced with "number of communities reached," alongside "new mother tongues included," "volume of local resources developed," and other community-specific KPIs. Such KPIs would drive the teacher development curricula in a positive direction. They could also be built into recruitment, selection and promotion criteria for professional cadres.

Develop new professional cadres

Policymakers should encourage debate on the development of new professional cadres specialising in the intersection of pedagogy and technology — perhaps with the title of "learning technologist for disadvantaged regions." These would be linked to the support networks of the COL Chairs (https://www.col.org/about/col-chairs), the International Society for Technology in Education (https://www.iste.org) in the USA and the Association for Learning Technology (www.alt.ac.uk) in the UK, in addition to exploiting guidance from EdTech Hub (https://edtechhub.org).

Key Resources and References

The topic of using digital technology to support teacher development for low-income countries and disadvantaged regions is vast and evolving, with many reports, briefs and papers from numerous organisations. This brief aims to complement these resources rather than duplicate them.

One major initiative is the TPD@Scale Coalition. Publications for a policymaker readership, available from its website (https://tpdatscalecoalition.org), include:

- Boateng, P., & Wolfenden, F. (2021). *TPD@Scale compendium*. Foundation for Information Technology Education and Development.

- TPD@Scale Coalition for the Global South. (2020). *Policy brief: Designing teacher professional development @scale for equity in education*. Foundation for Information Technology Education and Development. https://tinyurl.com/v2nkmww

- Laurillard, D., & Kennedy, E. (2019). *Digital multiplier model for teacher professional development at scale*. Foundation for Information Technology Education and Development. https://tinyurl.com/373umhax

The focus of this and much other work is more on mainstream formal education within established educational institutions, in classrooms, in schools, with dedicated educational technologies. Their concentration is on the Global South in general rather than more narrowly on low-income countries and disadvantaged regions. Our work draws attention to the risks of policies, research and interventions that fail to differentiate adequately in favour of the peoples and communities of such low-income countries and disadvantaged regions.

There are recent reports providing overviews of global educational disadvantage, including:

- UNESCO. (2020). *Global education monitoring report 2020: Inclusion and education: All means all*. UNESCO. https://en.unesco.org/gem-report/report/2020/inclusion

Other reports relevant to policymakers highlight the impact of the pandemic. The British Council produced a report in early May 2020 with an initial snapshot of how ministries of education were responding to the challenges of the educational crisis and followed this with a snapshot in October 2020. It gives some sense, albeit impressionistic and far from comprehensive, of the impact within education systems at the time of publication.

- British Council. (2020). *A global snapshot of ministries of education responses during the period of school reopening, in the state primary and secondary sector*. British Council. https://tinyurl.com/k2pjkbzn

Country-by-country statistics on the pandemic are available online, but these are at a national level for low-income countries and hence often fail to pinpoint disadvantaged regions. The better the gathering of these statistics becomes, the more the rapidity of changes becomes apparent. Johns Hopkins University's COVID-19 Data in Motion (https://coronavirus.jhu.edu) has emerged as a focal point for such statistics, specifically the "by region" display.

Insights for Education, specifically their Live Covid-19 School Country Tracker (https://education.org/country-tracker), uses data derived from Our World in Data for Covid-19 daily infection data, UNESCO for school status and enrolment data, and the World Bank for country data, plus "rigorous daily review of ministry reports, country response plans and policies, press and social media."

The UK EdTech Hub (www.edtechhub.org) produces a vast array of briefings and reports on the pandemic, including one that looks at EdTech responses to the pandemic and, in particular, their adverse effect on marginal peoples and disadvantaged groups in low-income countries.

- Traxler, J., Scott, H., Smith, M., & Hayes, S. (2020). *Learning through the crisis: Helping decision-makers around the world use digital technology to combat the educational challenges produced by the current COVID-19 pandemic.* EdTech Hub. https://docs.edtechhub.org/lib/5DWI862Y
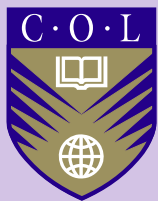
The intended readership is local and national decision-makers. EdTech Hub is also exploring how evidence and data can be used effectively to influence EdTech policy, particularly during the pandemic and afterwards.

- Pellini, A., Nicolai, S., McGee, A., Sharp, S., & Wilson, S. (2021). *A political economy analysis framework for EdTech evidence uptake.* EdTech Hub Policy Brief. https://doi.org/10.5281/zenodo.4540204

Over the years, the Commonwealth of Learning has developed a number of policy briefs and other publications on use of MOOCs in higher education and other sectors in developing countries. The publications highlight different instructional strategies and learning designs, and can be accessed on COL's online institutional repository for learning resources and publications, also known as OAsis.

- Commonwealth of Learning. (2016). *Guidelines for quality assurance and accreditation of MOOCs.* COL. http://oasis.col.org/handle/11599/2362

- Commonwealth of Learning. (2016). *Making sense of MOOCs: A guide for policy-makers in developing countries.* COL. http://oasis.col.org/handle/11599/2356

- Commonwealth of Learning. (2015). *A policy brief on MOOCs.* COL. http://oasis.col.org/handle/11599/825