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ONLINE VIDEO MEETING REPORT – 28th October 2020

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FORMAT & PARTICIPANTS

SECTION 1.

Format & Participants

1.1 Introduction

The purpose of this private video meeting for government and civil society officials in the Middle East & Africa, organised in partnership with HP, was to address the key issue of building teacher capacity given the oncoming growth of blended and online learning. Participants were encouraged to discuss the actions of their governments and institutions, and to make policy recommendations where appropriate.

Many countries are now facing the challenge of both teaching capacity and the need to ensure continuous professional development of teachers to account for new skills and competencies. With policy makers turning to how blended learning will be a necessity in the future, they are faced with ensuring that pedagogical practices evolve and that teachers adapt to digital technologies.

This event followed a natural progression of previous meetings that have highlighted the challenges and interventions in response to Covid. Not least of those challenges is teaching capacity, and this meeting of over 100 officials proved a stimulating engagement to share experiences with other countries and to hear from those on the frontline of education needing to act, intervene and implement.

During the private break sessions of the meeting, officials were encouraged to address the following questions:

Given the impact of COVID-19, what have been the most immediate consequences on national education policy, especially regarding better preparing the teaching profession for blended and online learning?

What has been your rapid response to building teaching capacity in the last few months?

How are you using technology to innovate and in particular asking teachers to come up with their own innovations in the delivery of virtual lessons

Looking to 2021 are you having to adjust your normal face-to-face teacher training and CPD activities such that you deliver scalable training online?

How much new content, notably the competencies



are required to deliver virtual lessons, do you now need to add to your teacher training?

Will the experience from COVID-19 prove to be a catalyst for designing a new educational framework and accordingly require further investment in building teacher capacity?

How has COVID-19 accelerated the need for teachers in your country to become more skilled in the use of new learning technologies?

1.2 Executive Summary & Key Findings of the Meeting

An interesting feature within the break-out rooms discussing building teacher capacity for blended learning was the use of the phrase 'silver lining' in reference to the pandemic. In her opening statement, Dr Christine Nasserghodsi referred to how more has changed in education and the way policy makers think about education in the last seven months than the previous one hundred years. This statement resonated with many participants. Equally, the Minister of Education for Jordan, H.E. Tayseer Al Noaimi, referred to how Covid has accelerated projects and that there will be no return to business as usual. Contributors to all the discussion groups produced many examples of this 'accelerator effect' of Covid. The discussions were wide and varied and here we give some of the key issues and even policy recommendations. The following are not exhaustive, but here are a selection of 11 key issues drawn from this meeting

Technology has assumed a critical role but edtech has been around for many years, so education needs to direct the way technology evolves and not the other way around.

Blended learning is now being seen in terms of the norm and yet it is the teachers that remain

at the centre of education in inspiring the next generation.

Many view that Covid as being a blessing in disguise for the education sector and for outdated education practices that are in urgent need of reform.

Programs for pre-service and in-service teacher training are critical with minimum competencies that accommodate the need for flexible responses to the dynamics of investments in education technologies.

The art of producing engaging and inspirational virtual lessons in the online environment is a major challenge and we are clearly in the early days with a great deal more evidence-based research required.

A noticeable aspect in response to Covid has been to witness teachers coming together, forming groups, and collaborating to share their experiences of the 'new normal'.

Online learning is mostly just a reproduction of face-to-face classroom materials and a great deal more work is needed to create truly interactive lessons and an engaging virtual learning environment.

Blended learning invokes the need for system wide changes, from curriculum to pedagogy to assessment.

Equity and access remain serious concerns and governments along with all stakeholders, especially telecoms operators, must act to stop the new digital divide that is already opening up

There is no one size fits all and getting blended learning right will take a measured and sophisticated approach considerate of local circumstances alongside cross-border and international collaboration.

Covid is proving to be both a catalyst for change and an accelerator of existing reforms. If education ecosystems are truly to be redesigned, then it can only be achieved through a whole government approach.

1.3 Format of Video Conference & this Report

In section 1.4 we list the one hundred & one participants of this video conference on skills and innovation. The most immediate lesson of online video conferencing is to ensure that every participant has a voice. Small groups are essential. So, after opening statements the event was broken into small

groups each with a moderator to take notes and provide a summary.

Prior to the break-out rooms there were opening statements from: H.E. Dr Tayseer Al Noaimi, Minister of Education, The Hashemite Kingdom of Jordan; and Dr Christine Nasserghodsi, Managing Partner, Mirai, former VP of Gems Education and Harvard Graduate School of Education. Although all discussions were recorded and transcribed for the purpose of this report, none of the quotes or what was said during the private break-out rooms is made attributable to any one person.

The following was the video conference format

Part A: Opening statements H.E. Dr Tayseer Al Noaimi, Minister of Education, Jordan, and Dr Christine Nasserghodsi, Managing Partner, Mirai Partners.

Part B: Sixteen break-out groups were formed, each with a moderator to record discussions and take note of the key points raised.

Part C: All participants returned from their break-out groups. A synthesis of key issues and closing presentation was given by Mayank Dhingra, Senior Education Business Lead, Middle East, Africa & Eastern Europe, HP.

The total time of the video conference was 100 minutes

After introducing the participants in 1.4, the format of this report is structured around the policy issues and non-attributable quotations. The participants hold senior positions in education from multiple countries and expressed what they are experiencing as well as their own policy recommendations.

In this report we have done our best to identify the main subjects taken from what participants said to provide a report in easily digestible sections. Normally, we may start by addressing the interventions, but because of the impact of Covid many people view this as a time to genuinely redesign education systems, and our order is as follows:

Covid as an accelerator and catalyst for change
Teacher training, capacity, and collaboration
The online environment, culture, and mindset
Connectivity and ICT for education
Governance, interventions, equity, and access

1.4 Participants

We would like to thank all those for participating and providing such outstanding contributions. The opportunity for them to openly converse in small break-out groups provides us with a discerning judgement on the key issues, immediate policy recommendations and their own insights into future sustainability. It is an honour for the organisers to host such a distinguished gathering. Participants are listed by country, alphabetically:

BAHRAIN: Latifa Albunoodha, Assistant Undersecretary for General and Technical Education, Ministry of Education
BAHRAIN: Dr Gurmullah Alghamdi, Rector, Arab Open University
BOTSWANA: Dr Spar Matthews, Principle Education Office, Ministry of Basic Education
BOTSWANA: Justin Setlhare, Education Officer, ICT Head of Department, Ministry of Basic Education
BOTSWANA: Ravi Srinivasan, Pro Vice Chancellor (Internationalisation), Botho University
BOTSWANA: Keolepile Phingie Motshusi, Project Manager, British Council, Botswana
COTE D'IVOIRE: Sylvie Tanflotien, Consultant at the Ministry Integrating Technology in Education, Ministry of National Education, Technical Education and Vocational Training
ETHIOPIA: Dr Eba Mijena, Director General for Higher Education Academic Affairs, Ministry of Science and Higher Education
ETHIOPIA: Dr Zelalem Assefa, Director General, Ministry of Science and Higher Education: Ethiopian Education and Research Network
ETHIOPIA: Dr Diriba Eticha, Directorate Director, Transformation and Good Governance, Adama Science and Technology University
FRANCE: Annemijn Perrin, CEO, Digital Skills Foundation. *Moderator*
GHANA: Akwasi Addae-Boahene, Chief Technical Advisor, Ministry of Education
GHANA: Ako Forson, General Secretary, Coalition of Concerned Teachers (CCT)
GHANA: Akwasi Addae-Boahene, Chief Technical Advisor, Ministry of Education
IRAQ, KRG: Dr Dawood Atrushi, General Director of Engineering and Projects, Ministry of Higher Education and Scientific Research
IRAQ, KRG:: Dr Salah Raza Saeed, President of Charmo University, Ministry of Higher Education and Scientific Research
IRAQ, KRG:: Dr Alan Faraydoon Ali, President of Sulaimani Polytechnic University, Ministry of Higher Education and Scientific Research
IRAQ, KRG:: Dr Heja Sindi, Vice President of Academic Affairs and Research, University of Kurdistan Hawler, Ministry of Higher Education and Scientific Research
JORDAN: H.E. Dr Tayseer Al-Noaimi, Minister of Education
JORDAN: Ibtisam Ayoub, Secretary General - Jordan National Commission for Education, Culture and Science, Ministry of Education
JORDAN: Eng Ruba Ahmad Omari, Director of Queen Rania Centre, Ministry of Education
JORDAN: Dr Nouh Alhindawi, Director of Information Technology and E-Transformation Directorate, Ministry of Higher Education and Scientific Research
JORDAN: Dr Nael Al-Adwan, Director of Investment and Promotions Department, Ministry of Digital Economy and Entrepreneurship
JORDAN: Shahed Atieh, Director of Digital Skills Development, Ministry of Digital Economy and Entrepreneurship
JORDAN: Tawfiq Abu-Baker, Policies and Strategies Section Head for the Telecommunications, IT and Post Sectors, Ministry of Digital Economy and Entrepreneurship
JORDAN: Dr Haneen Abdo, Program Advisor - Jordan Youth, Technology & Jobs Project, Ministry of Digital Economy and Entrepreneurship
JORDAN: Reem Bsaiso, Founder & Managing Partner Global Outreach & Head of Middle East Government Relations, Brains Global
KENYA: John Kimotho, Director Educational Media, Kenya Institute of Curriculum Development. *Opening Speaker*
KENYA: Mutheu Kasanga, National Chair, Kenya Private Schools Association (KEPSA)
KENYA: Anthony Nyutu, Modern Classroom Lead - Education, MEA MultiCountry Cluster, Microsoft
KENYA: Susan Mbogo, Public Sector Director, Intel Corporation. *Moderator*

KUWAIT: Prof Omar Al-Jarrah, Vice President for Planning and Development, Arab Open University HQ

KUWAIT: Prof Mohammad Tawalbeh, Dean, Faculty of Education and General Studies, Arab Open University HQ

LEBANON: Dr Fawzi Baroud, Assistant Vice President for Information Technology, UNESCO Chair on Open Educational Resources for Access and Success, Notre Dame University

LEBANON: Dr Milad Sebaaly, Curriculum Development Expert, Centre for Education Research & Development

LEBANON: Grace Talj, ICTE Coordinator, Ministry of Education and Higher Education

LIBYA: Dr Masauda Elsaved, Director General Centre for Training & Education Development, Ministry of Education

LIBYA: Dr Talal M Amara, Assistant Professor & Academic Consultant, Ministry of Education

MOROCCO: Elarbi Imad, President, Moroccan Centre for Civic Education

MOROCCO: Halima Benramadane, Community Manager in charge of Information Monitoring at GENIE Program, Ministry of National Education, Vocational Training, Higher Education & Scientific Research

MOROCCO: Abdellatif Fergoug, eLearning Project Manager, Distance Learning Division, National Center of Educational Innovation & Experimentation, Ministry of National Education, Vocational Training, Higher Education & Scientific Research

MOROCCO: Abderrahim Ghassoub, Doctor of Educational Sciences, National Laboratory of Digital Resources, Ministry of National Education, Vocational Training, Higher Education & Scientific Research

NAMIBIA: Johan van Wyk, Deputy Director: Information Technology, Ministry of Education, Arts & Culture

NAMIBIA: Nicolaas Eiman, Deputy Director: National Advisory Services, Ministry of Education, Arts & Culture

NAMIBIA: Leonard Amunime, Senior Education Officer ICT, Ministry of Education, Arts & Culture: National Institute for Education Development

NAMIBIA: Dr Charmaine Villet, Dean of the Faculty of Education, University of Namibia

NAMIBIA: Wilhelmina Louw, eLearning Programme Developer, Programmes & Material Development, Namibian College of Open Learning

NIGERIA: Ngozi Ebo, Head, Corporate Services, Corona Schools' Trust Council

NIGERIA: Emmanuel Eze, Head of Sales, Central Africa, HP. *Moderator*

NIGERIA, KADUNA STATE: Prof Ahmed Iliyasu, Special Advisor to Chief Executive, National Teachers Institute

OMAN: Haifa Al Lawati, Head of Training Evaluation Department, Ministry of Education

OMAN: Bahia Al Rashdi, Assessment and Evaluation Specialist - Teacher Training, Ministry of Education

QATAR: Nouf Al-Kaabi, Director of Policies and Research, Ministry of Education and Higher Education

QATAR: Khoulood Al-Malki, Head of E-Learning Committee, Ministry of Education and Higher Education

QATAR: Mahmood Al Saidi, Administrative Specialist - General Directorate of Private Universities and Colleges, Ministry of Education and Higher Education

SAUDI ARABIA: Abdullah Alasmari, General Director of Professional Development, Tatweer Company for Education Services

SAUDI ARABIA: Abdulla Al Jably, General Director eLearning & Training Centre TVTC, Technical and Vocational Training Corporation (TVTC)

SAUDI ARABIA: Eng Ali Al-Shehri, Development Supervisor in eLearning & Training Centre, Technical and Vocational Training Corporation (TVTC)

SAUDI ARABIA: Mounerah Aljuraeed, Professional Development Specialist, Tatweer Company for Education Services

SAUDI ARABIA: Dr Ali bin Mohammed Al-Rubian, Consultant in the General Administration for Research & Innovation, Education & Training Evaluation Commission

SAUDI ARABIA: Dr Hamdan Alamri, Consultant for The National e-Learning Center, King Saud University

SAUDI ARABIA: Zakaria El Sayed, Country Manager, HP. *Moderator*

SENEGAL: Aminata Lo, Teacher Trainer - SIMEN, Ministry of National Education

SENEGAL: Maïmouna Soudé Souare, Elementary School Inspector, Education Planning and Reform Direction, Monitoring and Evaluation Division, Ministry of National Education

SIERRA LEONE: Denzil Crowther, Chief Technology Officer, Ministry of Basic and Senior Secondary Education

SIERRA LEONE: Mohamed Jalloh, Ag Director of Communications, Ministry of Information and Communications

SIERRA LEONE: Nyakeh Yormah, Chief Technology Officer, Ministry of Information and Communications

SIERRA LEONE: Ezekiel Nonie, Manager, Teacher Development, Teaching Service Commission

SOMALIA: Ismail Abdi, Senior Advisor, Ministry of Education, Culture and Higher Education

SOUTH AFRICA: Dr Mark Chetty, Director – National Assessment, Ministry of Basic Education

SOUTH AFRICA: Veronica Hofmeester, Director: Continuing Professional Teacher Development, Ministry of Basic Education

SOUTH AFRICA: Paddy Padayachee, Deputy Director General: Teachers, Education Human Resources and Institutional Development, Ministry of Basic Education

SOUTH AFRICA: Dr Neo Mothobi, Chief Education Specialist, Ministry of Basic Education

SOUTH AFRICA: Dr Nokulunga Ndlovu, EDIET Division, School of Education, University of the Witwatersrand

SOUTH AFRICA: Joao Fidalgo, AE Business Consumption SADC, Intel Corporation. *Moderator*

SOUTH AFRICA: Terrence Naidoo, Education Lead, Southern Africa, HP. *Moderator*

SOUTH AFRICA: Farida Khan, Public Sector Account Manager Higher Education. HP. *Moderator*

SOUTH AFRICA GAUTENG: Handson Mlotshwa, Director: Teacher Development & ICT Programmes, Department of Education

SOUTH AFRICA, MPUMALANGA PROVINCE: Michelle Tebeila, Director: Management Information and Technology, Department of Education

SOUTH AFRICA WESTERN CAPE: Christelle Barkhuizen, Chief Education Specialist Capacity Building and Implementation, Department of Education

SOUTH AFRICA WESTERN CAPE: Gail Ahrends, Senior Education Specialist, Assessment Management, Department of Education

SOUTH AFRICA WESTERN CAPE: Chasfrend Ahrends, Deputy Chief Education Special Schools, Department of Education

SOUTH AFRICA WESTERN CAPE: Gavin de Bruyn, Deputy Director: eLearning, Department of Education

SOUTH AFRICA WESTERN CAPE: Esethu Stofile, Deputy Chief Education Specialist: eCurriculum Projects Coordinator, Department of Education

SOUTH AFRICA WESTERN CAPE: Gaironesa Daniels, Departmental Head: eLearning, Department of Education

SOUTH AFRICA WESTERN CAPE: Marchelle Fester, Senior Education Specialist: eLearning, Department of Education

SOUTH AFRICA WESTERN CAPE: Christo Davids, Senior Education Specialist: eLearning, Department of Education

SOUTH AFRICA WESTERN CAPE: Liesl Robinson, SES Coordinator - Inclusive Education. Cape Teaching and Leading Institute, Department of Education

UGANDA: Abubaker Bbuye, Emerging Education Technology Expert, Senior Education Officer, Ministry of Education and Sports

UNITED ARAB EMIRATES: Joseph Flynn, Managing Director, St. Mary's Group of Schools

UNITED ARAB EMIRATES: Karan Deep, Head of Innovation and Partnerships, GEMS Education

UNITED ARAB EMIRATES: Samia Dhaoui, Educational Expert, DSIB team, Knowledge and Human Development Authority (KHDA)

UNITED ARAB EMIRATES: Dr Tendai Charles, Assistant Professor: Faculty of Education, The British University in Dubai

UNITED ARAB EMIRATES: Dr Christine Nasserghodsi, Managing Partner, Mirai Partners. *Moderator*

UNITED ARAB EMIRATES: Mayank Dhingra, Senior Education Business Lead, Middle East, Africa & Eastern Europe, HP. *Moderator*

UNITED ARAB EMIRATES: Vikas Miglani, Corporate & Public Sector Manager, Middle East, HP. *Moderator*

UNITED ARAB EMIRATES: Purity Njeri Muchogu, Corporate & Public Sector Manager, East Africa, HP. *Moderator*

UNITED ARAB EMIRATES: Rohit Jain, District Manager East Africa, HP. *Moderator*

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UNITED KINGDOM: John Glassey, CEO, Brains Global. *Host*

UNITED KINGDOM: Claire Urie, Head of Government & International Relations, Brains Global

UNITED KINGDOM: Victoria Tate, Head of Education Partnerships, Brains Global

ZIMBABWE: John Dewah, Chief Director, Curriculum Development and Technical Services Department, Ministry of Primary & Secondary Education



DISCUSSIONS

SECTION 2.

Discussion

2.1 Opening Statements

H.E. Dr Tayseer Al Noaimi, Minister of Education, The Hashemite Kingdom of Jordan; and Dr Christine Nasserghodsi, Managing Partner, Mirai, former VP of Gems Education and Harvard Graduate School of Education.

H.E. Dr Tayseer Al Noaimi

The Minister immediately emphasised how the Covid pandemic has accelerated their work in the large-scale delivery of remote learning; and with that pushing students, teachers, and educators alike to develop digital competencies. The pandemic has made students and teachers more familiar with online learning tools which then has consequences for the curriculum – whether it be in terms of its design, what should be learnt and the impact on teachers. Furthermore, the education ecosystem needs to be more adaptive and responsive alongside ensuring there is long-term resilience against future shocks – including resilience and responsiveness in government.

In Jordan they are no longer talking about 'business as usual' in education; the pandemic has pushed them more rapidly towards adopting digital solutions along with a more profound transformation of the education system at large. The silver lining of the pandemic is that it brings with it more opportunities whereby not just blended learning being the norm but also moving toward hyper-individualised education with greater use of AI, machine learning and thus transforming the role of the teacher.

Regarding the teacher, one must address the critical questions of what type of skills teachers need to be empowered with to deliver learning outcomes and alongside this what needs to be done to improve continuous professional development and teacher training. Teachers should also be mentors to the students and adapt to the necessary new changes in curricula. We are no longer just talking about knowledge and memory but skills and lifelong learning.

In Jordan, with the lockdown, there was also an immediate appreciation of the greater pressure and burden of responsibility placed on parents and hence



the necessity to not view education as just a bilateral system but to encompass all stakeholders. In March, the Ministry of Education launched a robust learning platform to connect teachers and students and ensure the continuity of education. In parallel to that they launched dedicated platform just for teachers. They have designed programs focussing on ICT skills, empowering teachers to design their own lessons using digital technologies, training on blended learning and how to use online learning techniques to better engage with students and develop effective instruction.

All Jordanian students are now virtually connected, teachers are interacting online and assisting students with lessons and the production of homework tasks, as well as evaluation that is also considerate of the student's well-being. The Ministry of Education has developed with UNICEF a customised program called Learning Bridges, where they have condensed the existing curriculum and produced learning materials that focus on skills, especially reading, writing, mathematics, and science concepts. They have also reproduced these materials in printed format to distribute to students from grade 7 to 11.

Blended learning is definitely the norm, but it needs constant attention and improvement which they are continuing to do in Jordan. Such online activities are also accompanied with their dedicated daily broadcast and in Jordan they have three TV channels, especially for students in remote areas with less stable internet connectivity.

In summary it is important that all stakeholders in the education ecosystem work together closely, such that the Ministry of education is able to produce a clear strategy identifying what type of skills and what type of programs need to be embedded into K12 education. Teachers are and will remain a precious asset, especially so in the current times whereby transformation in the way we deliver curricula is also considerate of the health, well-being, and social and

emotional learning. This is about ensuring balance between instructional time, assessment, innovation, and the curricula itself.

Jordan is open to working with the wider community of educators to develop clear and direct programs to empower their teachers, making them ready for this kind of transformation and the impact Covid has had on the education system across all levels from policy to school management to curriculum to professional development. The Minister stated his continued desire to work closely with stakeholders from across the education ecosystem spectrum.

Dr Christine Nasserghodsi

The opening statement of Dr Christine Nasserghodsi is in conjunction with the presentation as per appendix A.

As a refresher of recent times, just as schools closed, they started scenario planning for re-opening with expectations that normality would return during the summer. But it became clear that any return to 'normal' was not going to happen, making schools and governments address the need to prepare for an effective approach to learning that would run across face-to-face and hybrid learning. We have come to terms with the fact that this will continue into the foreseeable future. Maybe we have seen more change and more desire to change in the last seven months than the previous one hundred years.

We have learnt recently that school systems and governments are more agile, and teachers are much more digital than we ever thought they were. But with this rapid change also comes an acceleration of risk, and teachers are at the centre of ensuring that risks are mitigated while at the same time working to harness new opportunities.

So, there are five key considerations that school systems need to think about in terms of hybrid and remote learning:

- Having access to the right operational and performance data so that teaching can be more effectively targeted to right students

- Adopt effective models of digital teaching and learning

- Shifting the paradigm from teaching to learning and how learning can happen continuously in or out of school

- How to meet the needs of priority and vulnerable populations such as special needs education

- Think clearly about assessment and with that remediation

Regarding the latter point about remediation, is the challenge of tackling learning loss because of the school closures. Great strides have been made in enrolment and youth literacy and every effort must be made to not jeopardise these achievements with children being out of school. We also know from recent research that no matter how fantastic the learning platform, the connectivity and access, even the best learning programs do little to address the needs of the youngest learners and those with special needs. Opportunities exist for more personalised learning, enhanced diagnostics, progress data and better utilising learning management systems to customise education. The pandemic has changed the mindset with increased societal acceptance amongst parents, teachers, governments, and local communities of the new modes of teaching and learning. Seemingly we are more agile and resilient than we thought.

There are three key levers in seizing the opportunities and mitigating risks: an effective digital strategy; the right technology for the right purpose; and professional learning for all key stakeholders, including teachers, school leaders, staff, and parents. So, what are the elements of a digital strategy? What goes into a digital strategy as we project forward beyond the current crisis? How do we want to make teaching and learning better if access to data or internet makes it difficult to have live synchronous lessons? Answering these questions needs to be at the core of strategy along with reviewing global best practice and thinking creatively. Furthermore, it is essential to have quality assurance metrics in place, that are connected to the medium and long-term vision of schooling.

One very important element is the redesigning of teacher training whereby we should be thinking about segmenting the role of the teacher into different capabilities that require different training methodologies. The considerations of a learning designer need to include an appropriate balance of life, synchronised, personalised, and independent work that is age appropriate and accessible. An example of this in Nigeria is where we use four elements to every lesson to ensure that students can learn – a teacher recorded video, links to outside resources, a game for practice and a live session. So, the training designer needs to know about how to design learning effectively, be good at developing content and how to use the platform.

This leads onto presentation skills and how teacher training needs to encompass such competencies in the hybrid environment. For example, UNESCO brought in trainers from the BBC to work with teachers in how to record lessons. The training of

teachers in online competencies needs to include differentiation of instruction, working with small groups, the use of digital learning and recording platforms, formative assessment and perhaps, most importantly, student engagement.

Yet we cannot have a one size fits all view. Some teachers may be less comfortable with such digital multitasking or being recorded for broadcast purposes. Yet there are plenty of responsible roles such as special needs education support, assessment and remediation, progress checking, counselling, student well-being and early year specialists. Regarding exam readiness, that requires the subject matter experts which can also encompass university graduates who can have training outside of the normal teacher service qualifications.

Giving two examples: one from the US and one from Ghana. A literacy advocate in Ghana who has organised volunteers to work with small groups of schoolgirls on their literacy. He uses artificial intelligence to assess the girls' literacy levels and then has trained teams of volunteers to work with the girls to ensure that their literacy skills progress and they are competent to re-enrol once schools are full open again. The flip side example in the US is where families whose schools have not re-opened, have formed clubs together to provide both pastoral and academic support in small groups called pods. Both models have a similar ethos behind them and yet look quite different. So, closing on five key recommendations for policy makers:

Develop a lean strategy focussing on where you want to be in one year from now, how you will get there and what systems and capabilities will be required.

Design systems and develop people for continuous iteration of hybrid and face-to-face learning

Prioritise in-person learning, especially for the most vulnerable and youngest learners

Adopt and develop teacher standards that address hybrid and distance learning

In the short-term create micro-credentials for a segmented and alternative teaching workforce that can be applied to faculties of education

2.2 Introduction to Break Out Groups

The excellent turn out of officials for this meeting meant breaking into a total of 16 groups. Many hours of parallel discussion raised a wealth of important issues and individual anecdotal experiences of educators on the ground.

The pandemic has rushed us into online teaching,

so going forward we need to take a step back and make sure we upskill our teachers in a planned and structured manner. We cannot expect all teachers to be experts in the use of online technologies and this limits the short term impact, meaning this time needs to be used to put the right structures in place to ensure all teachers obtain uniform standards.

The problem is that all teachers were trained in how to teach in a classroom environment. So, we have lots of reference points and examples of face to face teaching, but none of us were taught how to teach in an online classroom. There is thus no reference point to what an excellent online class looks like. So, when we think about observing teachers now and supporting their development, we still do not know what a great online classroom looks like. This may take several years of practice for us to master before we can really start seeing a wide spread of high quality, consistent online teaching.

It must not be forgotten that it is not too long ago that blended education options were maybe of lesser quality in terms of learning outcomes, but with Covid, blended learning is now mainstream. Of course, those at an advantage are those that have already deployed digital platforms, learning and information management systems and even provided students with devices. Their transition was a lot easier when closures started taking effect, so if outcomes are going to be more aligned with hybrid and blended learning then there needs to be an acceleration of implementing equitable access to avoid an enhanced digital divide.



2.3 Covid as an Accelerator and Catalyst for Change

Covid has disrupted the whole value chain of education. The value chain from content development, publishers, passing through to content delivery, moving on to learning and achieving outcomes and objectives. This post-Covid landscape

is also an opportunity for teachers to develop new content and the structure of online lessons – much of this might be by trial and error but ultimately successful models will prevail and they can then be incorporated into future competency-based curricula.

There is the view that the Covid pandemic has been somewhat of a blessing in disguise for the education sector because it has forced people to reflect and review their teaching practices. So, in the beginning it was all about getting technology into the schools and making sure the educators are equipped to enable online learning. Seven months later we are seeing that teachers are using the technology effectively and in fact the common belief that young people are digital natives and adept at the new technology is not so true. There is in fact an urgent need for improving the digital literacy of students.

In the UAE they are focusing on pedagogical practices that can apply online. For example, research shows that in an effective lesson the teacher should talk for around 20 – 30% of the lesson time. Many teachers did not know this and often we have lecturers used to speaking for up to two hours straight – but that does not work online. Students can switch off their cameras and not pay attention. So, now educators are devising more engaging online activities and teachers are using pedagogical practices that have been previously based on research and starting to apply them in the online context. The silver lining from the pandemic is that it may truly be an accelerator for 21st education, where we see transformation from the older models to new digital reform. Blended learning will certainly be part of that transformation.

In Morocco, Covid has obliged teachers to use ICTs – it is not a choice anymore. This requires training the teachers on how to use and integrate technologies. In the past this has faced resistance from teachers, but one could say the silver lining of Covid is that the lockdown has forced and accelerated the use of online tools. The government has supported this with online training sessions. Yet the professional development of teachers using digital technologies still faces many challenges.

In Botswana they had already started on an education and training sector strategic plan and these initiatives already have online education built in but with no sense of urgency. Covid has been a catalyst to speed up the process to encompass online learning in education. In terms of capacity building they are looking at reforms in the context of the 4th industrial revolution and looking at content in the global aspect of e-content and transforming

curricula. One could say they are catalysed as a nation to move faster with many of the projects already in place.

There is a hope that Covid is a catalyst for change. Being able to do this online, many have found that they have reached more teachers than previously with face-to-face courses. Still work needs to be done with the service providers to make educational content and services zero-rated. Many countries in Africa are paying high costs for data. The big expense is data, and these online courses use a lot of data and it is a problem that needs an urgent solution. Some teachers do not have the required resources to present these online lessons from home and many have found themselves using their own data. In this regard, the hope of Covid being a catalyst for change is unanimous and heartfelt.

2.4 Teacher Training, Capacity and Collaboration

The presentation of Dr Christine Nasserghodsi struck a chord with several participants, particularly the three levers of strategy, technology, and teacher training. There is also an issue of identity, i.e. where Covid is pushing teachers. There is an identity issue for teachers: you can easily transmit content, but you still need the teacher to mediate the deeper learning. As we look at curriculum recovery plans and teacher support plans, we need to keep that emphasis on deeper forms of learning. The digital technologies become a richer source when the teacher finds an identity and is empowered. The first step is moving teachers to more hybrid platforms without losing their essential identity. Thus, this journey of developing the right strategy towards a new paradigm for teacher training must be done in a way which brings all stakeholders on board and that we avoid resistance from the teaching profession to such upheaval.

The feedback from many teachers regarding the training programs is that they would like to be equipped with skills and knowledge in developing materials because of their concern over students who at home are not learning. In fact, some teacher groups have said that the emphasis on digital skills is not so much the priority because these can be learnt over time, but it is the need to produce the necessary materials for students. Using programs that include change management, such as the UNESCO ICT CFT framework, is useful in meeting with any resistance to the introduction of new technologies.

We cannot do away with the role of the teacher. They are central because they provide the basis for the inspiration that we need to give children. Teachers will always be the ones facilitating learning,

so how do we adapt the role of the teachers to blended learning and yet make sure they can do the different things they need to do to inspire students? Furthermore, the psychosocial support of teachers is of critical importance and cannot be ignored.

Education has traditionally been one of the most conservative activities and in the last seven months it has changed more than in the previous one hundred years. So, people are now looking at ways to redesign and reengineer our education systems. Policy makers need to think critically about what we need and what kind of teacher do we need along with looking at the demand of the labour market in the long-term.

Several participants referred to the very good response of teachers in light of this pandemic whereby they have taken the initiative to use immediately accessible tools such as *Zoom*, *Teams*, *Google* to connect with students. Many have found good use of communication channels such as WhatsApp to reach out to parents and students with updates and plans. Hence, a lot has been done without training and without existing guidelines in place. The challenge now is to build capacity and train teachers online and that needs far more robust ICT infrastructure. In many places the groundwork has been done and it is now a matter of reaching the people.

Many have realised that their strength is in the classroom – in face-to-face learning. Yet, to stay relevant one needs to embrace ICT training for the teaching profession. Even though the vast majority of countries have schools re-opened, the view is to look forward in terms of resilience and there is the need to ensure all teachers are skilled in ICTs, at least have the minimum level of digital literacy. The cost of data in African countries is a real challenge and governments need to negotiate strongly with the operators for the benefit of the education sector.

In Morocco, teachers made their own initiatives – creating *YouTube* channels, filmed their own lessons, developed their own e-learning platforms and even the formation of peer groups to train each other. Seemingly, such teacher collaboration has proved the most effective in learning features of platforms and sharing skills, technical skills for the e-learning technologies and communication skills for the delivery of lessons to students.

In Botswana, the teachers have been trying to collaborate, but the internet connectivity has proved to be the biggest limitation. The areas where teachers have evidently been the most lacking, is the technical skills on using software and the development of content material. That said, there

remains a shortage of both laptops for teachers and availability of e-learning content. This problem exists across many countries where we are seeing a shortage in the supply of devices with Covid impacting global production and supply chains at a time when demand for the technologies is spiking. Still there is a struggle in integrating ICT in learning because the competencies need constant practice and revision.

In Oman, through the training, they have encouraged teachers to think in a different way and the government has found how the teachers have innovated independently with their own *YouTube* channels and working to support each other. This has built a good culture amongst the teachers. Hence, we have to build a learning culture amongst teachers whereby they work and support each other, to build their own learning communities and collaborate to get better results. Collaboration is the building block for innovation. Oman is focussing on the platform that includes *Google Classroom* and the government's own platform dedicated for the younger students. The latter has only been recently developed and they will be watching its performance closely over the coming months.

In Jordan, their plans are to have a training master which involves each university in the country nominating three people from their e-learning faculties which control the process of online education in each university. They receive a workshop and then use that to give their own workshop to lecturers and teachers. This has exposed a number of weaknesses whereby many teachers have simply not been using technology enough – not even properly using emails or not connecting with the students using online applications.

For the teacher capacity building it goes from recruitment to the continuous professional development. Even before recruitment, there is the period of qualification at university along with their teaching diploma. Are we supplying them with the needed skills for 21st century teaching and learning? Are we really infusing their internships with up to date model classrooms? Do we have the system where such teaching licence needs to be renewed? Taking all these components together represent some of the key challenges in developing teacher capacity.

This is now a good time to consider a review of teacher preparation programs. Are we preparing teachers well for a similar crisis in the future? Maybe we are used to providing teachers with ready-made packages on how to teach, how to prepare

lesson plans etc. So, we need to work on enabling teachers to be agile and more flexible in addressing the students' needs and to be evidence focused in improving their practices. This is one of the key competencies that has emerged as a necessity during this time. The pandemic has accelerated the need to integrate effective e-learning modules and courses into the teacher training capacity. The pandemic has also highlighted limitations of technology if the teachers do not have the capacities or the students are not ready to learn.

Even before the pandemic, educators will say that technology must enhance teaching and learning rather than the other way around. Now is a time of both challenge and an opportunity. In many cases it has been difficult to bring teachers together to collaborate but now we are seeing teachers collaborate and this has led to the formation of professional learning communities. These groups can identify strengths and weaknesses of where we need to enhance professional development to help teachers.



2.5 The Online Environment, Culture and Mindset

Beyond the technical skills of the teachers, the next step is to evaluate the effectiveness of online learning. Strategies will need to be modified and evolve as we learn over time the best methodologies for engaging students and ultimately learning outcomes are the end goal. This is the hard part, to make the link between technology skills and the teachers' ability to deliver an online lesson. The methodology is not the same as in the classroom, therefore curricula cannot be the same.

Now educators are putting more emphasis on how the students learn rather than just studying for

examinations. This puts a greater focus on learning outcomes. But the current status of online learning is not learner-centred. It is still teaching, a teacher-based environment. To become more learner-centred needs an understanding of what are the 21st century skills and who is the 21st century student? What are the competencies and skills that we really need to focus on? Answering these questions then helps to better prepare teachers and to empower them to design new virtual learning environments.

More than just the focus on the technology of online teaching, there needs to be more work on the mindset and culture of online learning including values that are different than front of classroom learning. For younger children there is a real challenge with the engagement, particularly in them sitting in front of a laptop for any extended period of time. Looking at much of the online materials, there do seem to be too many PowerPoints, which the children just must go through on their own. So, there is definitely a need for teachers and lecturers to be trained in how to effectively design instruction for online, such that students can benefit optimally.

Participants spoke of the current lack of change management in terms of the online culture. In face-to-face instruction you cannot answer after "Googling" the question but online is much different. Some spoke of what is currently happening is more emergency remote teaching than proper online learning. There is a paradigm shift that has occurred during Covid. What is important is the human element, to listen to the voices of the students and to encourage teachers to collaborate. This social aspect is key to any long-term planning to build sustainability into blended learning frameworks. There is no education if there is no sharing. You cannot say you are an educator if you do not share.

More evident than concerns over the use of technology is that classes online are just not interactive enough. There is evidence of a shyness amongst students in participating in online classroom discussions and the ability of the teacher to engage individuals, to attract their attention and encourage participation is so far limited. The quality of online sessions needs monitoring and constant evaluation alongside the improvement of best practices. Blended learning is not just a mixture of the traditional front of classroom and online learning, but it is also an issue of content and synchronicity of learning and teaching. Is it synchronous or asynchronous? What adaptations need to be made to content as the delivery is very different online than face-to-face.

In Western Cape they will engage with schools to

start small discussion groups to support learners. One of the things many teachers are saying is that they are battling to contact some of the learners, even if they are using *Zoom*, *Teams* or *Google Meet* etc. They are saying that the interactivity is still not there so the department of education is embarking on training teachers to use the five E's of the instructional model: Engage; Explore; Explain; Elaborate and Evaluate. Any presentation must be interactive so that the learners are engaged all the time. They have found that the teachers are being innovative in forming their own small groups to share experiences. They have incorporated mind maps and infographics to better support teachers and create the resources for online education, including having feedback mechanisms from the teachers to help improve the training programs, many of which are still at an early stage.

In Saudi, about four years ago they developed a platform to support digital education with all the curricula uploaded digitally. It was not fully utilised because of normal schooling, but with the advent of Covid the system was in place for delivery of distance learning content. Teachers are now in the process of practising how to deal with the digital environment. Generally, this was not a challenge to upscale and divert resources, though in some more remote areas there was more of a challenge which has been met by using up to 12 TV channels. It is not the tools or technologies that are the biggest issue but the culture and mindset of teachers, students, and parents. It is important to create an environment of educational awareness so that they know how to adapt to a new approach to education. This aspect of culture needs to be a central pillar of any digital education strategy, otherwise countries will face a mindset bottleneck in blended learning. Besides the technologies, they have dedicated teachers in the field. This is not captured as an exercise but rather a habit that has been noticed as part of the experience of living through Covid. In Saudi they have now developed a full competency framework for the teachers with basic, intermediate, and advanced levels. This is a combination of course with soft skills and digital awareness.

In education there are often things we take for granted and in an online environment these can become really highlighted. Things like attendance, digital honesty, the submission of assignments and privacy have brought in new nuances that affect the actual engagement of transferring knowledge and building a connection with students. Staff well-being also needs to be addressed. Teachers are being asked to manage end-to-end, for which they have not been trained. It may be beneficial to learn from other sectors – such as how they are dealing with such

challenges in industry or in the healthcare sector.

In Namibia, the Ministry of Education works in partnership with the Namibian College of Open Learning (NAMCOL) who is working on an online learning platform to develop learning resources based on the syllabus which is then available as an open educational resource (OER). This is complimented using radio and TV programs to broadcast pre-recorded lessons. The schools have now started again, and students are back in class so these various online and multimedia resources will now be used as part of an overall blended learning approach.

Blended learning responds to national infrastructural issues. For example, within Gauteng Province they have dense population areas and have looked at blended learning in that context. In terms of the blended approach they use an in-classroom solution called 'Tech Enable' and provide out of school support for students learning from home. The department of communication in Gauteng rolled out a dedicated broadband network to different communities in the province so the education department has leveraged that. In terms of the approach to blended learning they are looking at key elements of what can impact outcomes, starting with the teaching style online – how teachers interact and assign work to learners based on contextual factors. The current online learning platform is also being configured so it can also be accessible offline using memory sticks – which automatically update once connected again. Other key elements include the medium of content, i.e. how content should be presented and the configuration of the online classroom. Also, one must be aware that different subjects need different adaptations for online learning. The context of online learning needs to also consider the profile of the learners to ensure the dissemination of appropriate material.

Covid has changed the content of CPD in some countries. One particular area is the question of how to keep students engaged while online. For example, every five or ten minutes ask a short question such that the teacher knows the students are interacting and focussed. Another aspect is health and well-being in which one has to consider sitting at a laptop for an extended period. In Oman, they introduced simple physical exercises and have found a good response to this. Furthermore, students understand that they need to focus on their own health and develop a self-awareness and responsibility for themselves.

A critical issue that Arab countries are suffering from is the assessment and evaluation tools that are

only in English and not in Arabic. For example, using MS 365, which has tools for exams but for Arabic speakers they cannot utilise it to the maximum potential. This matter of online assessment is an absolutely critical issue for Arab countries.

It cannot be ignored that blended learning invokes the need for a system-wide change which involves changing pedagogy, creating new procedures and protocols, and adapting methodologies for online assessment. Any professional development regarding the adoption of ICTs needs to include aspects of change management which is curriculum focussed. A lot of professional development courses can be poorly designed if only object orientated and do not account for the nuances of blended learning. So, for example, the Australian model includes development standards in three categories: professional knowledge; professional engagement and pedagogic design. And it is important to be specific in terms of what kind of outcomes one would envisage once the professional development has taken place.

2.6 Connectivity and ICT for Education

Regarding the use of apps in education there are a couple of immediate concerns, Firstly with the use of multiple apps it becomes difficult to gauge the improvement in students because we do not have the database or reporting mechanisms from the applications. Secondly, we must be very careful about the students' privacy, which needs to be considered when adopting new technology. We have the ambition for using technology, but this requires regulation and protecting of rights.

There is an increasing amount of material that is available for digitised content and that space is getting filled with private players. So, governments are working to form partnerships with market players in broadcast, telecoms, and digital content. The big issue that will face teachers is the issue of assessment. So how do we get teachers to be ICT ready for the different forms of evaluation? The tools available for teachers now are mainly in the form of summative assessment but not yet digitised. The big gap is how do we get teachers on hybrid platforms to deal with formative assessment on an ongoing basis? Formative assessment needs continuous feedback to the children such that it is taking the learning forward. Enabling a digital platform to do that would be an ideal. That said, the procurement of such tools will most likely first happen with wealthier private schools, with the gap remaining in the broader public sector. The concern with summative assessment is simply if children cannot attend schools how can they take exams in a controlled space. That comes back to

the design of the assessment.

In UAE some of the training is happening synchronously in real time and some asynchronously. So, they are preparing online courses for teachers with videos that the teachers can go through in their own time. Looking at social media such as *LinkedIn* or *Twitter*, we often see articles pop up promoting the top apps for online learning but often these are gimmicks and sales tactics for people to buy apps, when in reality educators do not need such a wide variety. Certainly, there should be a learning management system (LMS) with a couple of apps appropriate for the subject matter and then collaborative tools such as *Google Docs* so students can access the content in real time simultaneously. But for so many of the tools and apps there is a feeling of technology overload which students get tired of and teachers find overwhelming. So, the advice now is to stick to three or four teaching apps that can be used as go to tools on a daily basis.

In Kenya, the education management institute has already put teacher training online and they have no intention of returning it face-to-face because they have reached so many more teachers across the country. Generally, the country is well connected, and smartphone usage is widespread though the cost of data is fairly high. In higher education they are already seeing the impact on teacher training in universities, with an appreciation of the new normal and the need to probably assess the best and most appropriate edtech. The biggest discussion in the country now is the cost of connectivity and although institutions are able to respond in their negotiations with the telecoms operators, they have not designed a solution for families who now have to bear a greater burden with online learning at home. Some private schools have started procuring fibre connections and over the next few years there will be an inevitable increase in the adoption of edtech. Thus, we are going to see an increase in the cost of education if there is no government intervention on the cost of connectivity.

In Jordan, all universities are working on the LMS platform to better connect with students. Immediately the quality of the system was not perfect, but the priority was for the instructor to connect with the student. Not all university course were automated; maybe out of 4,000 courses just 300 or 400 courses automated on a slide or PDF. But this is not what we call online learning. Over time the instructors increased the number of digitised courses and by Spring, 90% of course were successfully upload – allowing universities to prepare for their online exams. The Ministry of Higher Education organised workshops on how to build online

course of a high quality. Now the goal is to have asynchronous learning in which the instructors build specific digitised courses.

In Morocco, they already have the GENIE program for the access to ICT for education across the public-school system. The program involves the equipping of schools, the training of teachers, how teachers can design and develop their own resources. This has been backed up with the broadcast of courses on TV channels covering all subjects across all grades. They view the pandemic as an opportunity to improve the capacity building of teachers along with a sound and holistic plan for ICT integration, recognising the critical role of teachers in providing quality education. This includes professional development such that the teacher is not just implementing but are leading educational innovations and are part of the transformation.

In Namibia, they started revising their ICT for education policy in 2018. The framework is on paper but not executed, but due to the pandemic some of these guidelines are now being implemented. Yet, they are experiencing how teachers are opening up to technology. For example, they have implemented a MOOC course obtained from the Commonwealth of Learning and have seen high levels of teacher enrolment, with more than 80% of the teachers who enrolled now having completed the course.

In Nigeria they have found success through the forming of social groups amongst students and teachers. They have taken advantage of using their LMS where students can register and have access to the course materials. All the facilitators across over 400 centres across the country have taken part in online training and they are also collaborating with the Open University to host teacher training programs.

In Zimbabwe, they are working towards every

student having a device (tablet or laptop). This is a massive exercise that will involve bringing in multiple partners. Currently, 60% of schools have internet connectivity and the target is to have students more fully equipped with devices by 2023. Right now, they are focussing on e-learning platforms which every school has access to.

2.7 Governance, Interventions, Equity & Access

Covid has really highlighted the inequalities in the provision of educations. Those from poorer communities and rural areas have not benefited from online education resources. How do we narrow the gap? It is possible utilising blended learning but there must be the political will to ensure there is investment in the ICT infrastructure. We should be thinking how we make this kind of learning available and accessible to all on the basis of moral purpose and not led by just proprietary technologies. If education is going this way, we need to think how to bring everyone on board, especially those most disadvantaged. How do we get people to re-imagine the school and classroom and rethink the framework for supporting teachers? One size does not fit all. Teachers have different capabilities, and we should focus on leveraging these different skills within the profession.

We have seen a division between those who can and those who cannot afford. There are plenty of technological innovations, a vast wealth of educational resources online and software applications that can help with learning. But this has advantaged only those who can afford such technologies or who are in a public system that has equal access – which is not the case in most countries. On equity there is concern across the board of children who may have fallen through the cracks and these must be attended to. The inequity of access is a concern for remote and rural areas. We are now digging deeper into the gaps in the system. Not just academic gaps, but the gaps in digital learning and the self-esteem of more vulnerable and minority groups.

The pandemic exposed societal weaknesses whereby the poor could not access devices and internet, but the wealthier ones could and governments, especially in Africa, did not have any national frameworks in place to deal with this effectively. For those children that managed to go online or had access to some form of learning, the difference with those who have not had is stark and concerning. In Kenya, they have just finished doing their national assessment to check where the learning losses are – the country now needs to have a national discussion on teacher training.



What also needs close attention is the motivation of students especially if there is more blended learning and they need to manage their time and outcomes at home and outside the normal structure of the school day. Teachers accept that there will be more emphasis on formative and project-based assessment. During the period of prolonged school closures, it has been important to monitor students, with more time spent learning online we need to know how much of the lessons they have followed. Working on parental awareness and good communication with families is now a key part component of blended learning both for the schools and for the ministry of education.

The role of parents is a key question. In Qatar they developed a hotline for parents to obtain guidance, how to use the platform, and provide answers – especially for younger children who require more supervision. They parents have gained a better understanding of the educational process generally. For the digital transformation, they have also organised digital literacy workshops for the parents which has involved other parts of the government. So, the burden is not just on the ministry of education. An important aspect is the feedback, so the ministry is now carrying out surveys of parents and all stakeholders to determine the lessons learnt and experiences during the school closures. They have learnt, for example, how difficult it can be to teach live lessons online – there are challenges with maintaining student attention and ensuring they are engaged in the subject. The teachers need to learn from each other and peer group clusters for sharing experiences are going to be an important ingredient of blended learning.

Ghana has a major teacher education reform program. They have done a lot in response to Covid starting at the colleges of education where teachers are being trained. In addition, they have established an LMS with materials uploaded and set up a program to train all teachers in blended learning and teaching. They believe that teachers are central to education and therefore we cannot take away the element of the expression that teachers provide. A new program to train 20,00 teachers who will cascade to their colleagues will start in the next few weeks. They have also looked at how content and pedagogy can transform blended learning to ensure long-term resilience and certainly be prepared for any future shocks to the system. Technology has assumed a very critical role but edtech has been around for many years; but education needs to direct the way technology evolves and not be dependent on the current functions of technology. Education needs to drive technology in the context of every country and local community.

In Sierra Leone they are using the radio network to deliver lessons and are now assessing what have been the learning outcomes and how students have benefited. They have now returned to skills but the world is unpredictable so they are now working on being better prepared through organising clusters of teachers who can learn together and share their ideas and experiences. They are also looking at how to produce video clips and share the good lessons amongst the teaching community so they can develop more themselves. Peer-to-peer teaching groups are evidently important in the overall picture of developing blended learning. Private schools have easily moved to digital learning, but public schools have been struggling so urgent efforts have been made to work with the telecoms operators to provide far better connectivity to schools.

In Western Cape, starting in 2001, they began a project to put hardware in schools and to train teachers about technology and how to integrate that into the curriculum delivery process. Teachers started knowing technology and this migrated to using laptops and interactive whiteboards in the classroom. What was not realised is that the teachers did not know how to migrate those digital skills to the online environment. When the pandemic came many did not know what to do next. It involved changing the mindset by taking existing services, such as PowerPoint, and turning that into interactive content. This involves the teachers changing their thinking from having computer skills to a digitally transforming online environment. This opened up new avenues for the department of education to develop an e-portal that has a whole host of resources. The department has changed its mindset to resourcing online platforms and the re-training of teachers, not just in technology but in their pedagogical thinking. They are now thinking of putting access points in shops for uploading digital resources. Covid in the last 8 months has been a considerable catalyst in encouraging innovation amongst all stakeholders, with everyone chipping in to respond to the challenges.

Saudi has invested considerably in e-learning since 2006, starting with the trainers and the teachers. So, when the pandemic started, the move from face to face learning to full e-learning took just one day because of the investment in technologies and training. That said, teachers have still faced difficulties in using some technologies and how to employ tools effectively. So, they have designed a training kit for teachers in order to employ online tools that ensure students are fully engaged. The good results in the last semester have shown that the system has adapted quickly to the change. The ministry of education has worked on higher quality

content that meets the needs of the country's Vision 2030, including the necessary 21st century skills. Covid has accelerated many of the practices and projects in the ministry of education which has ended up with elements of the main platform in Saudi – *Madrasati*. In 2020 the National Centre for E-Learning has launched standards for K12 education and for the training of teachers in online teaching.

In Oman over the last month they have trained 60,000 teachers under two main pillars: the first being the technical training in how to use platforms such as *Google Classroom* and *MS Teams*; the second being the educational part on how to be an online teacher, how to do assessment online and how to interact with students. For grade 12 they will have blended learning by dividing the classes into two or three groups, rotating in school attendance, depending on the size of classes. Those parents of younger children, especially in grade 1 to 4, need the most support in supervising their children. Online learning is no longer an option, but a necessary method of learning and all schools and universities must be prepared accordingly. Besides the training, teachers are coming up with their own initiatives by conducting workshops amongst themselves and forming their own professional learning communities.

Jordan has formed a national committee for directing online learning and for the universities to work in the standard and unified way. Now they have asked the universities to maximise their learning management IT infrastructure. There are weak points – such as student equipment and connectivity. They have distributed devices to the poorest students and asked the telecommunications operators to give the students a good internet package. An important initiative in Jordan is a cooperation between the ministries of digital economy and education to allocate a budget over the next 5 years to cover the cost of purchasing laptops. The distribution will be done according to the government databases that identify the low-income families and prioritising them first. The program will target 300,000 students from low-income students with laptops and internet access fully paid for by the government to facilitate online learning. They already have the platform on the cloud with lessons uploaded.

From a policy perspective, UNESCO has done quite a bit through their ICT Curriculum Framework for Teachers (CFT) which is a policy guide in terms of how ICTs should be embedded into professional development of teachers. The challenge remains the gap in the core curriculum and ICTs now need to be viewed not just as a tool but as medium that is included within the pedagogical philosophy.

In South Africa, the challenge is the inequality in society that extends to schools. So, the better equipped schools could respond quickly, the children had devices and were able to connect easily, the teachers were already trained, and they were able to get online learning going immediately. Those schools with good ICT infrastructure in place were already teaching using ICTs. Unfortunately, other schools were disadvantaged in terms of both connectivity and access to devices. In many cases teachers were not trained and had very little interaction with technology. There was also a great deal of diversity in the responses depending on the province. In Western Cape they already had an online e-portal with open educational resources (OERs). They loaded this with more resources and made it accessible to parents and the department of education looked closely at the responsibility of parents at home. For teachers, they expanded their training opportunities with accessible online tools that the teachers could use straight away. When the children returned to school, they found that some were on par with the academic year's curriculum and some had missed six weeks' worth of curriculum. So, the department of education streamlined some of the curriculum, looking closely at what could be taken out and to focus on what they considered the most important aspects. With students back at school now, the priority is to catch up for the rest of the year.



In Oman, their students are coming back to school in mid-November with just 10% in the schools at a time and 90% learning online. Training of teachers

in online learning has started already with about 85-90% of the teachers covered already. In general, the teachers were worried how to start teaching students online, but their confidence has built because of the training – using *Google Classroom*. They have also trained the supervisors and principles to help with the needs of the teachers.

In Zimbabwe they have come up with four forms of blended education: digital platforms, the choice of modules, the information for the courses and finally the plans for back to school. Before Covid they were running an online platform with for 1.6 million learners and this has now been used to upload a lot of content. The ministry now has open educational resources supported by UNESCO with source materials and study guides for revision. For the teachers they have an e-learning platform supported by World Vision. The policy is now that every public school should have an online facility with all schools connected – particularly in rural areas where the challenge is hardest.

In Nigeria they have responded to Covid with innovations, including developing a new platform that allows students to register, have access to course materials and the learning management system (LMS). They have uploaded course materials so students can access remotely and at the same time interact with teachers. The interventions have involved training facilitators and the training of staff in collaboration with the Commonwealth of Learning. Regarding CPD there has been a particular emphasis on strengthening science and mathematics and are in the process of signing an agreement with UNESCO to train teachers.

In Cote d'Ivoire they are running a program with UNESCO to bring 21st century skills of innovation and technology to schools. The main challenge with Covid was to look at what was immediately available which involved a fair amount of trial and error especially with the challenges of internet connectivity and a robust power supply. The hope for the new school year, starting in September, was to see how they can scale up their pilot programs. Currently, there is a lack of official professional development after teachers have left their pre-service training so there needs to be long-term plans to adjust and have an established framework for ICT training for teachers.

Sierra Leone had their own experience from introducing radio teaching programs whereby teachers came to the broadcaster to record lessons countrywide using community stations. These radio lessons were also embedded on the ministry website. The mobile operators are working on pilot programs including an online platform for teachers as well as

them providing free of charge access to educational content. NGOs have been running pilots to provide ICT labs for schools and training for teachers in ICTs. Students can go to these labs to be taught basic ICT skills and the use of software.

In Ghana they will be opening the full school stream in January 2021. They have noted in Ghana that the classroom infrastructure should be designed to accommodate both the demands of social distancing and this limits the size of classroom. Covid came as a shock because the country was not practicing online learning. The government is now moving to install WiFi in all secondary schools with the aim of making sure that Covid does not come as a surprise again.

In Morocco, the two main reforms of the national charter for educational training and the national strategic vision put a focus on digital and distance learning. But, of course, most were not prepared for the pandemic causing a gap in digital learning. The ministry of education has taken plenty of measures to promote the use of variety platforms, like *MS Teams*, along with civil society stakeholders. Yet, there remain challenges especially amongst those families who cannot afford all the technology tools from smartphones, to laptops to the increased cost of purchasing data. One positive is that the pandemic has created a debate between the policy makers, educators, and parents and certainly this is the most parents have ever been engaged in education.

In Libya, they are in a unique situation with their own specific challenges. Virtual classes are not an option right now, but more necessary than ever. The first step in distance learning was the recording of lessons and creating a platform for students to access these virtual lessons in their own time. Libya also has a large geographic area with populations widely spread and not fully served with a robust nationwide ICT infrastructure. An important issue is the readiness of students in using and being taught in virtual format. This requires features ready to deliver with the teachers and students having the necessary digital skills to properly leverage applications. The first step has been teacher training in how to use new technologies effectively with 21st century skills.

In Dubai, the KHDA is a regulator so works to encourage schools to offer the training to teachers and ICTs are fairly well-established as part of the professional development. They also have their national innovation strategy that promotes the unlocking of innovation in teaching related to student outcomes. This is about imbuing a culture of innovation with the technology being there to support innovative practices. Before Covid, since 2018 there has been an increase in the use of ICTs

by teachers and it has been a priority for schools to develop. They also have examples of online schools. In response to Covid they work closely with the ministry of health to properly inform and update schools for the planning of emergency distance learning.

In Jordan, the schools were closed on 15 March 2020 and they have transferred to distance learning and used online tools. The main challenge was teachers not knowing their roles and unable to use the technology to effectively communicate and teach. So, an educational emergency plan was set up that included an online teacher training program with up to 90 hours of training programs. But they still need to be supported in multiple ways to be effective in using online learning. It is essential to encourage the teachers to use the tools and how they can enhance practices using technology.

In the UAE, they have 18 international curricula in addition to what is provided by the ministry of education curriculum. The most important message to the schools was how are they ensuring that learning is continuing when the emergency plans were implemented. The private schools have the freedom to choose their own platforms with an emphasis on good communication and collaboration with parents. They did not prioritise synchronous versus asynchronous being cognisant of the difference between on and off-screen learning time. That said, by witnessing so many platforms in practice, the government has learnt a great deal of what is effective and what has the most impact on outcomes. This motivated them to develop their own 'what works' platform that is open to teachers and schools to identify best practices and showcase solutions.

In Morocco, to meet the challenges the regional training centres for education have mobilised their special education councils and adopted a policy of flexibility in using a variety of platforms. Many measures have been taken to ensure pedagogical continuity at the level of mobilisation, communications, technical support and ensuring equal access to training content.

Somalia, with the support of the World Bank, has now designed a new syllabus for teachers that includes encompassing technology and the necessary best practices. They will start with training 6,000 teachers but one of the current challenges is overall teaching capacity in the country. They wish to encourage teachers who have a passion for technology and wish to employ more who are tech savvy and further professionalism of the teacher workforce.

There is also a necessary call for more coherent and joined up government. Such challenges being faced now in the education sector may involve many other government departments – telecommunications, planning, industry, labour etc. All eyes are looking at ministries of education, but they cannot overcome all these problems themselves. In Jordan, the ministry of education has coordinated with the ministry of communications to help support in the provision of devices, better connectivity, and access to labs across the country.

In Botswana, some subject have been captured and broadcast on public television and the country is now working to improve its e-learning platforms. Given the nature and geography of the country it is necessary to have a blended approach. With the capacity building of teachers this has meant more collaboration with local universities for the in-service training.

If committing to greater blended learning, then engaging with parents is essential for policy makers. Current e-content is often not attractive to students and so parents need to spend more time with their children to teach them the most important skills. What are we going to do about content for grades 1 to 4 if the impact of COVID-19 continues? The content requirements for older students are very different, so policy makers need to differentiate between grades and governments need to give more guidance to the parents.

2.8 Concluding Points

The coming year will very much be one of transition where ministries of education should have a comprehensive evaluation of their education strategies, focussing on the type of content, the type of platforms, the type of regulation and the type of training for teachers. All countries would be well served in dedicating time to have a detailed evaluation because of Covid. Also, some students may be behind, so it is necessary to have programs to both assess the level of learners and implement a catch-up program for those who have lost time.

A number of the conference participants pointed to national differences and the need to avoid falling into a "one size fits all", especially for blended learning policies and curriculum reforms; but all countries will have a new generation of digital learners with new competencies. Teaching and pedagogy is very different with online learning and preparations need to be made accordingly. Even though there may be differences between countries, the post Covid landscape could well lead to better international collaboration with shared technologies and the

leveraging of regional purchasing power with the edtech industry.

It is still too early to judge what works and what is effective in hybrid education. More research and analysis is required to determine frameworks and to aim for a more complete and integrated solution. This may involve using artificial intelligence, determining suitability for online assessment, and choosing which types of curriculum resources are utilised. Any such complete solution clearly requires far greater investment in the ICT infrastructure and equipment.

Concerns over potential budget cuts in the future brought mention of teacher professional development. CPD tends to be one of the first things cut when budgets are reduced. This sits alongside the impact of Covid whereby there is now greater call for more investment in professional development because we are asking a lot of teachers right now. Supporting them more may mean incorporating new skills sets or coaches with the ability to build skills as part of their work, as opposed to doing it on their own time. This may also require professional learning for administrators who will need to have a greater understanding of online learning and what hybrid learning looks like.

The building of capacity and supporting teachers should also encourage greater peer-to-peer collaboration within the profession; the formation of working and focus groups to share experiences to augment regular professional development and that lessons learnt can be included in future CPD policies. Teachers very much lie at the heart of solving the challenges opened up by Covid and central to supporting them is to equip teachers with more skills and develop robust standards for the certification of digital competencies. Policy makers need to establish new frameworks for online learning and accordingly invest more in teacher training to build capacity. Some participants spoke of there being a compulsory ICT component within all teaching pre-service qualification.

Blended learning is certainly putting a big load on all stakeholders and a real concern is the well-being of students, teachers, families, and school leaders. Many schools may feel good about the quality of the distance learning they are providing but young people are social and under the circumstances of school closures and a variety of new restrictions many have struggled and this impacts on their learning.

The redesigning of education ecosystems implies huge social change that requires a whole

government approach. Ministries of Education cannot do this alone, there needs to be a whole government approach and a multi-stakeholder approach. This includes bringing together telecom companies, publishers, edtech start-ups, radio and TV stations; this is what creates a lot of innovation and ingenuity amongst education ministries – bringing such stakeholders into the discussion and finding out ways in which to leverage their ingenuity and bring their knowledge, skills and services to learners. So, we are now finding that education has really become everyone's responsibility.

2.9 Closing Synthesis

Note: the closing synthesis was provided by Mayank Dhingra of HP and is accompanied by the presentation in Appendix B.

At HP we have been doing our bit, our duty of care to try and mitigate the impact of what is happening because of Covid to the education sector. As ministries of education and as custodians of the welfare of the children you want to look at access, you want to make sure that you have devices, internet coverage, digitisation of the curriculum. All of this must be taken care of because that really is the first level where you are able to give the child access to the education that you had planned.

The second part is the tools, creating the right learning management systems, whether it is stitching them together by bringing assessment management, device management, behaviour management, and putting it all together yourself, or taking on a comprehensive learning management system. And, furthermore, trying to make sure that the learning pathways remain open through the digital medium. The third part is the capability and the capacity. How do we make sure that our teachers are equipped for this new digital environment? And it is not just the teacher but also, we often forget that the students also need to be taken on this journey. So how do we put them on the same journey?

Along with the teacher capability what do we also do is in terms of road mapping for the future. So, all of you in one way or the other are trying to address these three broad parameters and trying to make the best of the resources that are available to you. As HP we have come back and created a program, which we initially called, "BeOnline", and that was run as a duty of care program. We were not charging for it; we were trying to make sure that we offer you a learning management system, along with consultancy, which was able to take care of immediately putting a remote learning plan in place for the country.

So we have built this program for the classroom of the future, where we have said that there are three constituents in the class, the student, the teacher, and the IT arm sitting at the back, because when you bring in so much technology, you have to support the IT and be able to manage it. So how do we create the right hardware? With Intel we have some really rugged and great devices which can stand the trials and tribulations of what a student puts them through. And how do we layer that with the right learning management system? How do we give the teacher back the control of the screens? We have software which gives the teacher control of the screens. So, we have put all of this together and call it the Classroom of the Future . We launched this in August with Intel, and we are now spreading this through Middle East and Africa.

So HP is always happy to support and advise you on how this can help and benefit your countries; but even more importantly, even when you get the tools and the access sorted out, you still have the burning platform of building the right capability and the capacity for the teachers to handle all of this and to make sense out of it, and to promise the same learning outcomes that you had at the start of the year when the pandemic was not around. So as a response, we created something called *HP IDEA*, which is the HP Innovation and Digital Education Academy. Intel has supported us on this as has Dr Christine from Mirai Partners in putting this program together. We have created two pathways on this: an immersive one-year program called *HP IDEA Fellows*, and a smaller program called *HP IDEA Associate*. In this program, we have taken the best practices from the University of Michigan, the High Leverage Teaching Practices program, and we have taken on three frameworks from the Harvard Graduate School of Education which are

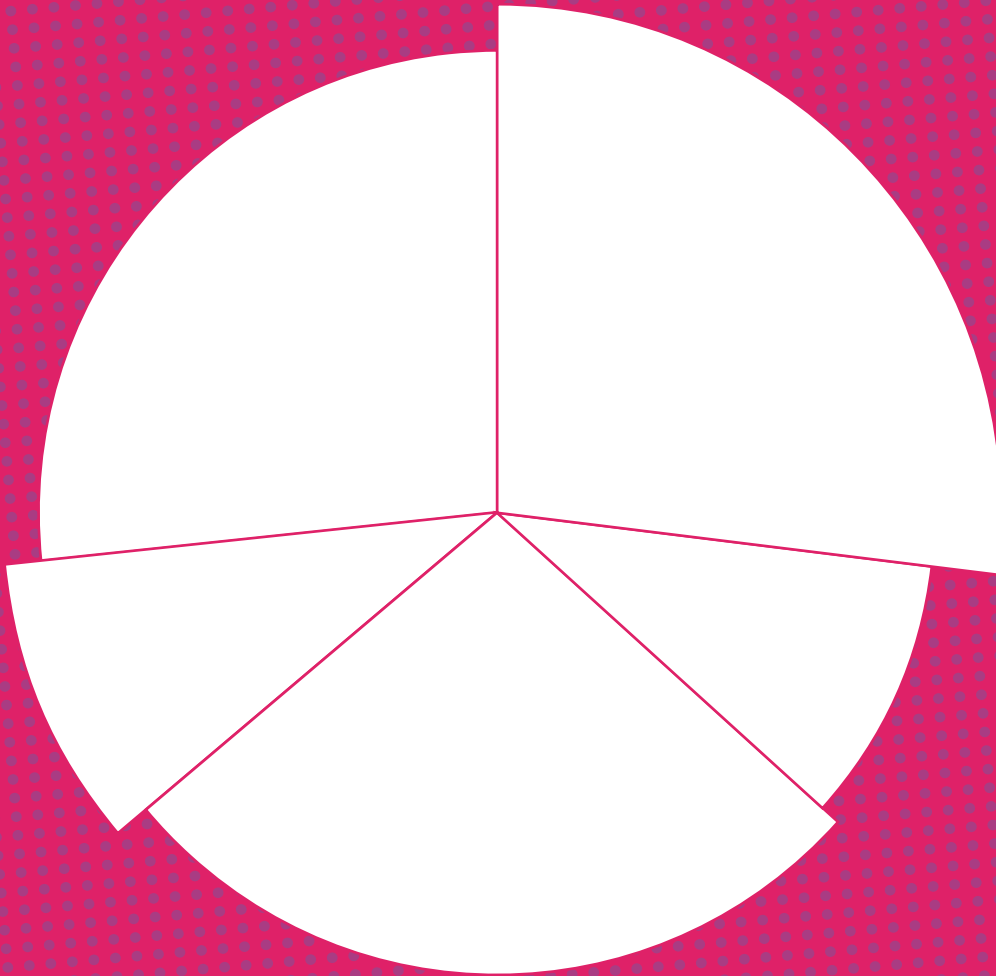
Creating Communities of Innovation, Teaching for Understanding in Technology, and Leading Learning that Matters, this is a reflection of everything that I heard in the breakout room where we asked how do we create communities which can support each other and innovate? How do we create and help teachers to understand technology better, and for them to be able to use technology better for their students, and for learning that matters? So, we have put these frameworks together, we run a one-year program, which we are running as a duty of care program for the moment. We also allow a select number of public-school teachers and private school teachers to go through this and award them as *HP IDEA Fellows* at the end of the program.

We have also mapped this to individual country goals on digital pedagogy. In Africa, we have mapped to the CESA Goals and the UN Sustainable Development Goals. So if you actually see we are able to support against all of these strategic objectives and help you develop teachers who understand technology, who understand innovation, and you can scale this through your school and through your community, and eventually your country. All this is part of our objective to support and enable better learning outcomes for over 100 million people across the globe in the next four years. So, we have made this commitment and we are on track in developing and reaching this goal, through the support of all the ministries and all the communities that we operate in. So really, I would like to thank all those for their active participation in this meeting

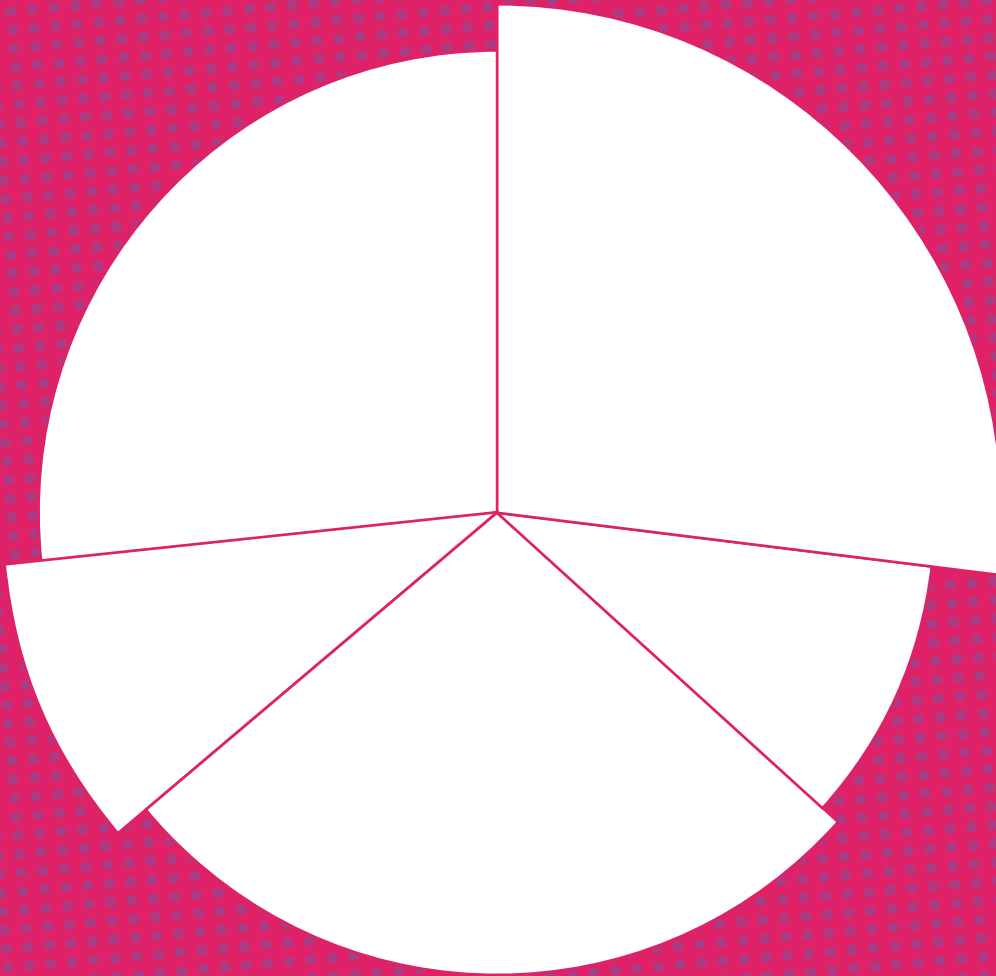
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For further details or copies of this report, please contact john.glassey@brains.global





APPENDICES



APPENDIX A

Building Teacher Capacity for Hybrid & Online Learning

Christine Nasserghodsi

Mirai Partners

Brains Global

Closure and rapid digitization
using available resources and
platforms



Scenario planning for reopening
including distance, blended, and
face-to-face learning



Setting **impact priorities** and
metrics, ie exam years or early
years



Platform selection, training and
deployment – **planning for
and optimizing blended
learning**



**Harvesting
insights**



We've seen more change in
education in the past 7 months
than in past 100 years – how
will this shape your
environment?

How will you prepare your
teachers?

Key Considerations in Hybrid & Remote Teaching & Learning



With this rapid change, come
accelerated risks and opportunities

Teachers are at the centre of ensuring that
risks are mitigated and opportunities are
harnessed



Risks

COVID-19 hit amidst a qualified teacher shortage

Most systems around the world acknowledged that teachers needed new skills to better address student needs pre-COVID, yet teaching online requires a new set of skills

Progress in enrollment and literacy will be jeopardized the longer students are out of school

Even the best distance learning programs do little to address the needs of the youngest learners as well as students with special education needs

Opportunities

Greater personalized learning

Enhanced diagnostic and progress data

Increased societal acceptance of new modes of teaching and learning

Scaling the impact of effective teachers



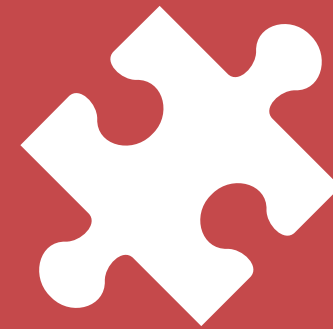
Developing a digital learning strategy

Engage students, parents, and other key stakeholders

All professional learning must be linked to your strategy

mirai

Levers to seizing opportunities and mitigating risks in teaching and learning



Strategy



Technology



Professional learning for
teachers, staff, leaders, and
other key stakeholders

Rethinking the teaching profession – right now

Segmenting and redefining teaching roles

Role	Capabilities	Training
Learning designer	Designing units and lesson to include the appropriate balance of live, asynchronous, personalized, and independent work that is age appropriate and accessible	Learning design Platform use Content development
Live online teacher – large group	Introducing new content, clear, engaging, dynamic Can be 1 to many and should be recorded and accessible	Presentation skills, ongoing feedback – TV, radio, pastor!
Hybrid teacher	Simultaneously with in-person and online students (or split shift in low-tech settings) Minimal health risks, no pre-existing conditions	Differentiation of instruction, teaching large small groups, use of digital learning and recording platforms, formative assessment, student engagement
In-person teacher	Assessment, intervention, pastoral care, small group instruction Minimal health risks, no pre-existing conditions	SEND support, assessment and remediation, progress checking, counselling, well-being
Cottage schools leaders – early years	Small group instruction in core subjects or exam readiness for the youngest learners in homes	Train and stipend parents to deliver scripted curricula in literacy and numeracy
Exam readiness hubs	Subject matter experts with	Train and stipend university/graduate students to prepare others for exams at hubs including government offices, hotels, houses of worship

Recommendations

01

Develop a lean strategy – Where do you want to be in one year? How will you get there? What systems and capabilities will be required to get you there?

02

Design your systems and develop your people for continuous iteration across distance, hybrid, and face-to-face learning so that learning can continue whatever crises we may face.

03

Prioritize in-person learning for the most youngest and most vulnerable learners

04

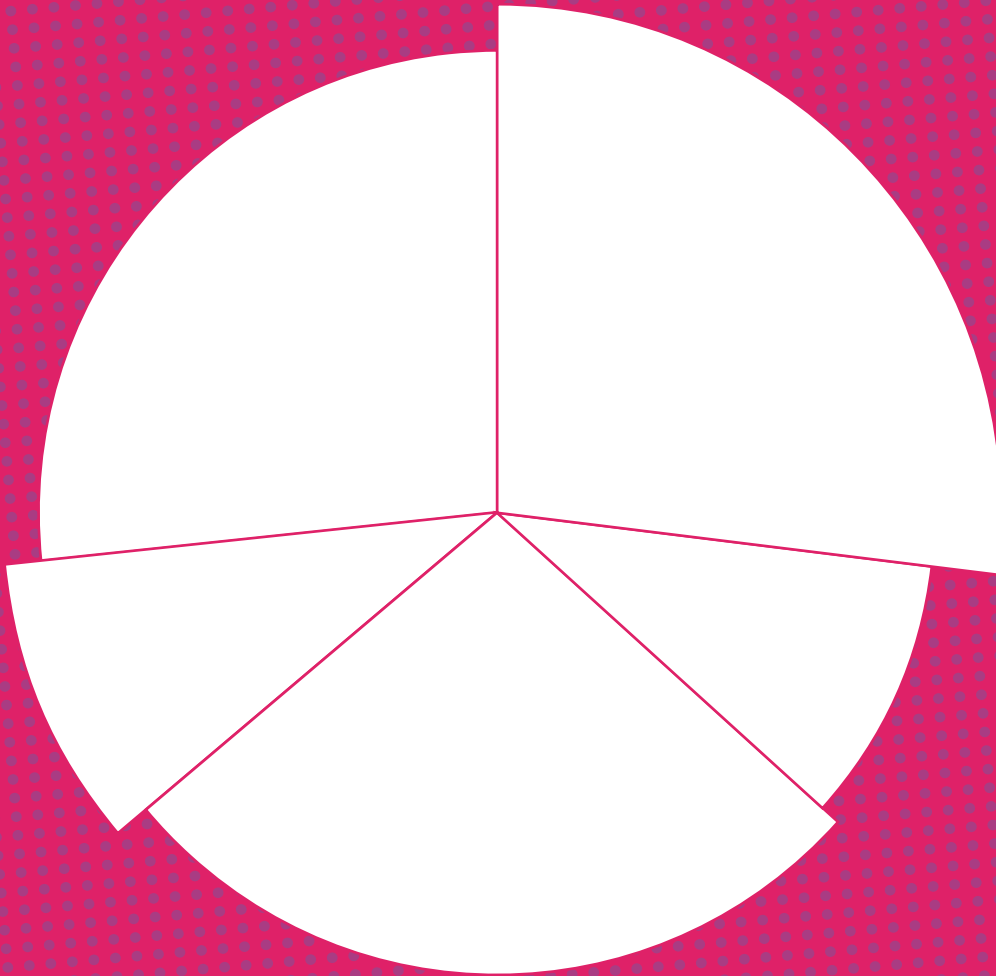
Adopt teacher standards that address hybrid and distance learning

05

Create micro-credentials for a segmented and alternative teaching workforce



THANK YOU



APPENDIX B



Supporting the Education Sector in mitigating the impact of COVID19

Mayank Dhingra | HP Inc



Need of the hour

Supporting Country preparedness & capacity


Access

- Devices, Internet Coverage, Mobile network, Curriculum digitization

Tools

- Digital repository, Collaboration paraphernalia, Functional e-solutions or one composite LMS

Capabilities

- Faculty skills on digital pedagogy, Students adaptability, Governance, Roadmap
- 

Classroom of the Future

Creating an ecosystem
where smart hardware is
coupled with cutting-edge
pedagogy software to
support blended learning

- **HP-Intel Education edition devices** – ruggedized and secure (at device level)
- Ensuring a virtuous pedagogy loop by empowering all the key stakeholders in the classroom:
 - ***Student Centricity*** – ‘Classera’ for engaging & digitized content, adaptive learning and collaborative pathways
 - ***Teacher Empowerment*** – ‘Classroom Manager’ for real-time assessment, screen monitoring and control
 - ***IT Governance*** - ‘TechPulse’ for device diagnostics, application analytics and predictive maintenance

Run as a duty of care program - ‘BeOnline by HP’ - until 30th Sep’20

[REGISTER NOW](#)

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HP INC. IN COLLABORATION WITH INTEL LAUNCHES 'CLASSROOM OF THE FUTURE'

Aug 21 | 2020

In response to the sudden shift in home learning, HP have collaborated with Intel to

Burning Platform

“...all the technology and tools that we bring into the classroom are a lost investment if the teachers don’t have the skills necessary for digital pedagogy. Teacher capability development is a burning platform for Africa...”

H.E. Dr. Phumzile Mlambo-Ngcuka

United Nations Under-Secretary-General

Executive Director UN Women

Ex-Vice President RSA



Transforming Digital Pedagogy

HP IDEA Schools

HP IDEA (Innovation & Digital Education Academy)

platform marks a school's commitment to transform their Digital Pedagogies to flourish in the 21st century and keep themselves agile and inventive during challenging times.

HP IDEA will have two programs for participating schools

HP IDEA Fellow (one-year pathway) for a select cadre of innovative practitioners and instructional leaders.

HP IDEA Associate (focussed coursework, designed by **Fellows** under guidance from **Mirai & HP**)

Schools will be badged as **HP IDEA Schools** and participants will be recognized as **Fellows** or **Associates**. Participants will receive certificates of completion from **HP**.



HP IDEA Fellows

The **HP IDEA Fellows** is a one-year immersive teacher-development program designed to enable teachers, leaders, and students to develop and access new learning modalities in select countries in the Middle East and Africa.

Participating schools select 3-6 teachers and instructional leaders to shape practice at the school-level through 4 conferences and weekly learning session.

HP IDEA Fellows program draws on;
The High Leverage Teaching Practices from University of Michigan
Project Zero (Harvard Graduate School of Education)
Creating Communities of Innovation, Teaching for Understanding, Leading Learning that Matters
Practices of effective Business Incubators and Accelerators



HP IDEA Fellows MEA – aligning with **SDG 4**

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

4.4

By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

4.6

By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

4.c

By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

Element Four

HP will enable better learning outcomes for over

100 Million People



263 million

children and youth around
the world are out of school



HP will invest over
\$20 Million



Thank you