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REPORT ON GOVERNMENT ONLINE VIDEO MEETING – 24th February 2021

TEACHER TRAINING AND DEVELOPMENT: POLICY, PRACTICE AND CAPACITY BUILDING

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GOLA Report

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FORMAT AND PARTICIPANTS

SECTION 1. Format and participants

1.1 Introduction

The purpose of this private video meeting for government and education officials along with civil society leaders, organised in partnership with Cambridge, was to discuss one of the stand-out challenges for educators and governments in light of the Covid pandemic: teacher training and continuous professional development (CPD). With limitations on face-to-face teacher training and the new demands of blended learning requiring upskilling of teachers, policy makers are now faced with challenges and critical decisions on how to best build capacity and deliver professional development in the teaching profession. Participants were encouraged to discuss the actions and policies of their governments, and to make recommendations where appropriate.

In response to the Covid pandemic, many officials have spoken of the challenges around teacher training, developing digital skills, how blended learning will impact pedagogies in the future, and the importance of evaluation qualifications and competencies. Participants were encouraged to share any constructive examples of new pedagogical practices that have helped with the continuity of education in recent times.

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

CPD: How will models of attending face-to-face shift and what practical solutions of training teachers and better use of online resources will help deliver scalability?

Digital Skills: What mechanisms do you recommend implementing to upskill teachers in digital literacy and is your country now equipping teachers with improved digital systems?

Innovative Teaching: Do you have examples to share with colleagues of any new innovative pedagogical practices in your country that have helped the continuity of education?

Evaluation: Given the shift to competency-based curricula and formative assessment, do you think it is necessary to include evaluation qualification in teacher training?

Blended Learning: More blended learning in the future will impact pedagogies, classroom management, online learning, and many other factors. Does such a range of new skills demand that blended learning be a key subject of CPD?

Mental Health: Student and teacher well-being has become one of the major issues to confront policy makers in the last 12 months. Accordingly, what are your government and schools doing to help the learning community now faced with considerable mental health concerns?

1.2 Executive summary and key findings of the meeting

The opening speakers discussed several issues around teacher development including:

Teachers are motivated when there are good training programs and identifiable career progression.

We have witnessed a greater supervisory role of parents with remote learning, and this creates a new pressure point for teachers.

Having specialised institutions of teacher training where all programs are integrated with overall education policy is essential in supporting teacher development.

Professional development policy should be evidence-based with needs assessments that determine priorities such as STEM, inclusivity, ICTs, research, and digital literacy.

Educational performance is directly linked to the quality and motivation of teachers and good training models should include incentivisation.

Policy makers must make the public argument for committing to online teacher training and CPD.

Huge changes inevitably accompany a career of 30 to 40 years so clearly training must be continuously invested in

The following are not exhaustive, but the important issues drawn from this meeting are:

Success Stories

The success stories during the pandemic have shown teachers to be adaptable and creative in a very short time. Teachers have moved out of their silos within the classroom and their sharing of practices over the last year has been borne out of necessity, not driven by policy. The pandemic has seen all in education rising to the challenge. Habits have been broken and education hugely disrupted, yet teachers seem to be talking to each other more then ever and policy makers are collaborating more than ever. The meeting was littered with numerous anecdotes of how teachers have adapted to new pressures with creativity and fortitude. Covid has inspired a rapid reaction amongst everyone in education – civil society working at its best. The real knowledge lies with teachers and policy makers should work to develop this knowledge base of teachers further.

Changing Mindsets

The shift in mindset of responding to the needs of the digital generation is having the biggest impact on teacher professional development. We cannot expect all teachers to be experts in new technologies, but government must put in place structures to ensure uniform standards. The entire education ecosystem is changing, accelerated by Covid, the transition from knowledge-based system to competency-based is plain for all to see. The paradigm shift in teacher training is that all were taught how to teach 'front of classroom' and now need to deliver lessons online.

Motivation

The system should motivate teachers with rewards that fit their desire to improve skills and capacities. Motivation needs feeding with the right tools and concerns remain over the availability of online tools to support teachers as well as access to up-to-date devices and robust connectivity. Any online innovations within the profession need to be accredited and linked to professional development awards to ensure teacher motivation and trust in CPD. Any certification must be matched by a well-managed database that keeps a record of skills and attainment.

Online Pedagogy

Education is a fundamental social activity that promotes collaboration and creativity. Now we must ask how online learning can promote these skills in different ways. Teacher training requires programs with more instructional designers to support teachers in school as it is simply not reasonable, nor practical to expect all teachers to be skilled in constructing online courses. Support mechanisms are essential. The current digital tools are inadequate for the education sector; equally education has lagged in adopting new technologies. The seriousness of the situation is such that countries and institutions need to be clearly thinking of creating world-class digital platforms. There is no reference point of what an excellent online class looks like – it will take several years of practice to get it right. The entire socialisation aspect of online learning and pedagogy needs to be considered.

Collaboration

Some countries would do well to share their experiences and the lessons learnt over the last year – especially regions with common language and practices. Within countries we are seeing teacher organisations, community practices and peer groups spring up nationwide as teachers and school leaders have endeavoured to learn from each other. Many are proud of recent collaborations and see this how building a community practice also builds relationships and promotes knowledge and good practice.

Evolving CPD

It is likely to be some time before we see a return to full face-to-face teacher training. Teacher training needs to now take place remotely and that means planning for a more permanent virtual environment. Not every teacher is competent in new technologies but Covid has accelerated this aspect of professional development. The challenge for governments is not just the upskilling of teachers but of the trainers who have had a lifetime of being effective in classroom and face-to-face teaching methods yet are completely inexperienced in delivering virtual training programs. CPD must embrace its own regular updates as new innovations appear in education technology and equally policy makers must update compliance frameworks.

Equitable Access

Digital learning is now non-negotiable, and many are concerned of the inequality of access and danger of a digital divide in education. Equitable access is now an essential priority, with the right to education being matched by the right to access. Issues of equity and gaps in learning have always been there – the digital education experience has exposed them more.

Mental Health

Mental health has become a major issue of Covid's impact on education. Both the new stresses on

teachers and concern over the mental well-being of students missing the pastoral care of the school day. With a limited institutional playbook for this in education, policy makers are now required to give greater consideration to social and emotional learning.

1.3 Format of video conference and this report

In section 1.4 we list the one hundred and six participants of this video meeting on teacher training and professional development. 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 support the conversation.

Prior to the break-out rooms there were opening statements from: HE Dr Abdulsalam Al Joufi, Deputy Secretary General of the Arab Bureau of Education for Gulf States and Former Minister of Education Yemen; Rt Hon Charles Clarke, Former UK Secretary of State for Education; and on behalf of the Georgia Minister of Education, Dr Berika Shukakidze, Head of the Georgia National Centre for Teacher Professional Development. 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 from HE Dr Abdulsalam Al Joufi, Rt Hon Charles Clarke and Dr Berika Shukakidze.

Part B: Thirteen 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. Q & A closing session with Prof Colleen McLaughlin, Director of Educational Innovation: Faculty of Education, University of Cambridge, hosted by Jane Mann, Managing Director of Cambridge Partnership for Education.

The total time of the video meeting was 110 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 government and civil society from multiple countries and expressed what they are experiencing as well as their own recommendations. In this report we have done our best to identify the main subjects taken from what participants said to provide a disseminated report that flows as follows:

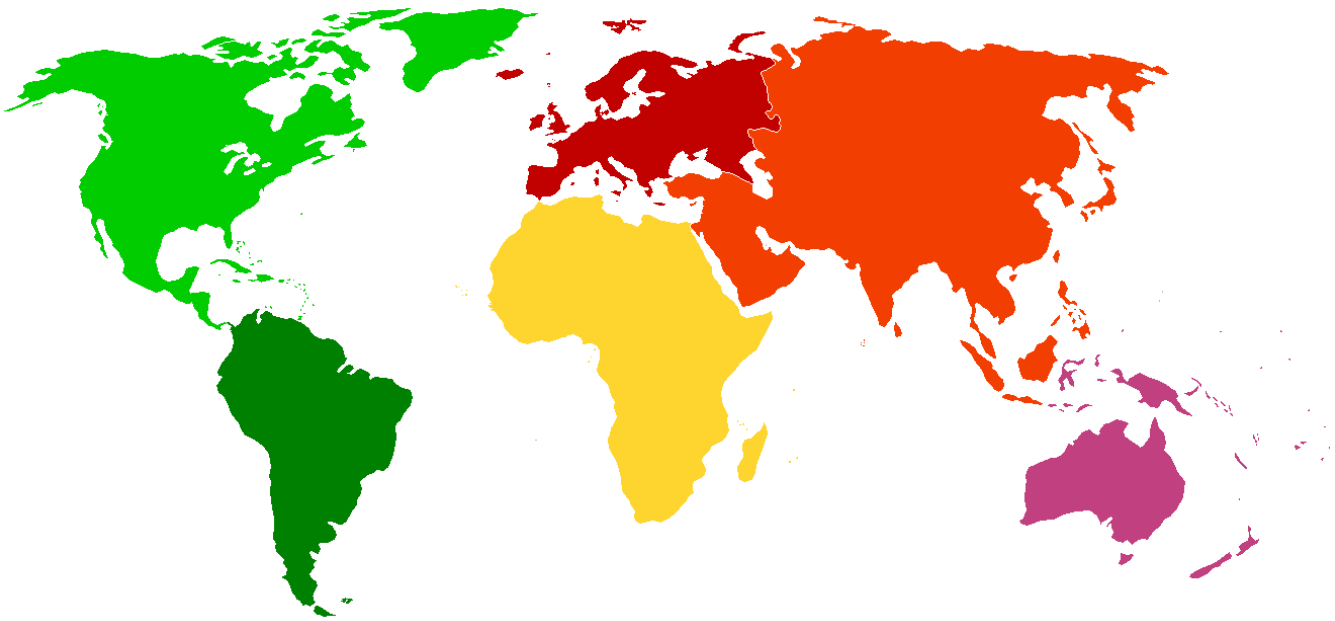
The Response of Teachers to the Pandemic

Managing Change and New Dynamics in Teaching

Digital Education and Online Learning

CPD Policy in a Post-Covid World

National Responses and Initiatives



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 and immediate policy recommendations. It is an honour for the organisers to host such a distinguished gathering of educators and policy makers. Everyone committing their time during this ongoing period of uncertainty is a true testament to their desire to ensure strong decision making around the future of the teaching profession. Participants are listed by country, alphabetically:

ALBANIA: Albana Markja, Head of Teacher Qualification and Professional Development, Ministry of Education Youth and Sports

ALBANIA: Albana Çelaj, Head of Unit, Division of Pre University Project Preparation and Feasibility, Ministry of Education Youth and Sports

ALBANIA: Anila Ferizaj, Head of Unit, Division of Pre university Education Development Programs, Ministry of Education Youth and Sports

ARMENIA: Sona Koshetsyan, Executive Director, Ayb Educational Foundation

ARMENIA: Nikolay Israyelyan, Educational Projects' Coordinator, Ayb Educational Foundation

ARMENIA: Sylvia Yacoubian, School Director, Ayb School

ARMENIA: Meri Hovsepyan, Academic Director, Ayb School

ARMENIA: Anna Akopyan, Director for Community and Pastoral Care, Ayb School

ARMENIA: Anahit Harutyunyan, Head of Curriculum and Assessment Department, Ayb School

BAHRAIN: Latifa Albunoodha, Assistant Undersecretary for General & Technical Education, Ministry of Education

BAHRAIN: Dr Mohamed Alseddiqi, Director of Technical and Vocational Education, Ministry of Education

BAHRAIN: Dr Shaikha Mufeez, Director of Planning and Educational Projects, Ministry of Education

BANGLADESH: Sima Sarkar, Lecturer in Educational Development & Policy, BRAC Institute of Educational Development

BANGLADESH: Nafisa Anwar, Lecturer in Educational Development & Policy, BRAC Institute of Educational Development

BANGLADESH: Somnath Saha, Lecturer in Educational Development, BRAC Institute of Educational Development

BANGLADESH: Dilruba Sultana, Lecturer in Educational Development, BRAC Institute of Educational Development

BOTSWANA: Dr Fernando Siamisang, Director, Human Resource Development Planning, Human Resource Development Council

BOTSWANA: Dorcas Phiri, Deputy Director in the Department of Teacher Training and Technical Education, Ministry of Tertiary Education, Science & Technology

BOTSWANA: Dr Spar Matthews, Principle Education Officer, Sciences, Ministry of Basic Education

BOTSWANA: Taolo Tsimanyane, Acting Deputy Director, Department of ICT & Media Services, Ministry of Basic Education

BOTSWANA: Lentikile Matswagothata, Coordinator Education and Training Sector Strategic Plan, Ministry of Basic Education

COTE D'IVOIRE: Sylvie Tanflotien, Consultant at the Ministry Integrating Technology in Education, Ministry of National Education, Technical Education and Vocational Training

CYPRUS: Maria Jacovidou, Chief Inspector, Ministry of Education and Culture

EGYPT: Eng Mohammad Seddik, General Manager of Information Systems & Decision Making, Head of the Digital Transformation Unit, Ministry of Education and Technical Education

GEORGIA: Dr Berika Shukakidze, Head of National Centre for Teacher Professional Development, Ministry of Education. *Opening Speaker*

GEORGIA: Sophia Gorgodze, Director, National Assessment & Examinations Centre

GHANA: Akwasi Addae-Boahene, Chief Technical Advisor, Ministry of Education

GHANA: Ako Forson, General Secretary, Coalition of Concerned Teachers (CCT)

GHANA: Lawrence Sarpong, Acting Director, Department of Professional Development of Teachers, National Teaching Council

GHANA: Prof Jonathan Fletcher, Key Advisor, Teaching & Learning Partnerships, Transforming Teaching Education and Learning (T-TEL)

GHANA: Ernest Wesley-Otoo, Leadership for Learning Coordinator, Transforming Teaching Education and Learning (T-TEL)

JORDAN: Dr Yosef Aboushaar, Director of the Directorate of Planning and Educational Research, Ministry of Education

JORDAN: Abed Shamlawi, Director of Strategic Affairs, Queen Rania Teacher Academy

JORDAN: Rola Said, Director of Programs, Queen Rania Teacher Academy

JORDAN: Hala Taher, Director of Development, Queen Rania Teacher Academy

JORDAN: Feras Al Omari, CPD Manager, Queen Rania Teacher Academy

KENYA: John Kimotho, Director Educational Media, Kenya Institute for Curriculum Development

KENYA: Peter Ndoro, CEO, Kenya Private Schools Association (KEPSA)

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: Lynn Faitrouni, Project Coordinator, Ministry of Education and Higher Education

LEBANON: Rania Ghoussoub, Head of Pre-Service and In-Service Training Bureau, Centre for Educational Research & Development

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

LEBANON: Dr Claudine Rizkallah Aziz, Educational Consultant, Centre for Educational Research & Development

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

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

NIGERIA: Chinedum Oluwadamilola, Principal, Corona Secondary School Agbara, Ogun State

NIGERIA: Adetokunbo Matilukuro, Head of School, Corona School, Lekki, Lagos State

NIGERIA: Anthony Ilobinso, School Administrator, Corona School, Lekki, Lagos State

NORTH MACEDONIA: Tamara Kjupeva, Counsellor, Ministry of Education

OMAN: Dr Magda Talib Al Hinai, Director General for the Specialised Institute for Professional Training of Teachers, Ministry of Education

OMAN: Dr Intisar Ambusaidi, Deputy Director General, The Specialised Institute for Professional Training of Teachers, Ministry of Education

OMAN: Salim Abdullah Al Karousi, Director of English Language Curriculum Development, Ministry of Education

OMAN: Dr Mahfoodha Al Bahri, Lead Trainer, English Experts Training Programme, Ministry of Education

OMAN: Fahad Al Balushi, Senior English Supervisor & Academic Trainer for the Specialised Institute for Professional Training of Teachers, Ministry of Education

QATAR: Maha Abuhelaiqa, 1st E-Education Specialist, Office of the Assistant Undersecretary for Educational Affairs, Ministry of Education and Higher Education

SAUDI ARABIA: HE Dr Abdulsalam Al Joufi, Deputy Secretary General, Arab Bureau of Education for the Gulf States and Former Minister of Education Yemen. *Opening Speaker*

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

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

SAUDI ARABIA: Dr Mohammed Alhaqbani, Program Manager, Tatweer Educational Technologies (TETCO)

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

SENEGAL: Dr Mawa Samb, Teacher Trainer – CRFPE, Ministry of National Education

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

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

SOMALIA: Mohamed Mukhtar, Director of Curriculum, Ministry of Education, Culture and Higher Education

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

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

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

SOUTH AFRICA: Dr Alton Dewa, Lecturer: Educational Information Technology, School of Education, University of the Witwatersrand

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

SOUTH AFRICA NORTH WEST PROVINCE: Dr Jacob Tholo, Chief Education Specialist: Quality Promotion, Department of Education

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

SOUTH AFRICA WESTERN CAPE: Anita Van Vuuren, Chief Education Specialist: Capacity Building, Department of Education

SOUTH AFRICA WESTERN CAPE Gafieza Ismail, Deputy Chief Education Specialist: Change Management Manager, Department of Education

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

SOUTH AFRICA WESTERN CAPE: Magdalena Benn, Senior Education Specialist, Department of Education

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

UNITED ARAB EMIRATES: Aalya Mesmar, Smart Learning Specialist, Ministry of Education

UNITED ARAB EMIRATES: Maryam Alketbi, Systems Specialist, MBRSLP, Information Technology, Ministry of Education

UNITED ARAB EMIRATES: Mohamed Raouf Houhou, Senior Specialist, Higher Education Business Development, Abu Dhabi Education Council (ADEK)

UNITED ARAB EMIRATES Nabeel Mohammed Basheer, Senior Specialist, Higher Education Sector: Department of Education and Knowledge, Abu Dhabi Education Council (ADEK)

UNITED ARAB EMIRATES: Nadine Tarazi, Senior Education Advisor, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Rt Hon Charles Clarke, Former UK Secretary of State for Education. *Opening Speaker*

UNITED KINGDOM: Prof Colleen McLaughlin, Director of Educational Innovation: Faculty of Education, University of Cambridge. Closing Speaker & *Moderator*

UNITED KINGDOM: Jane Mann, Managing Director, Cambridge Partnership for Education. Co-Host & *Moderator*

UNITED KINGDOM: Karen Kester, Director of Operations, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Dr Hanan Khalifa, Director of Education, Transformation and Impact, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Steve King, Senior Education Advisor: Central Asia, the Caucuses and Bangladesh, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Kagendo Salisbury, Head of Marketing & Communications, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Dr Daniel Brooker, Senior Education Advisor (East Asia & Europe), Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Dr Daniel Morrish, Head of Curriculum Programmes, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Dominique Slade, Head of Education, Content & Solutions, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Julia Citron, Head of Professional Development, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Megan Thomas, PR Communications Manager, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Aisling Miller, Senior Digital Marketing Manager, Cambridge Partnership for Education. *Moderator*

UNITED KINGDOM: Tracey Peel-Ridealgh, Logistics Coordinator, Cambridge Partnership for Education

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

UNITED KINGDOM: Reem Bsaiso, Head of Middle East, Brains Global

UZBEKISTAN: Amirulla Abdullaev, Deputy Director, Agency for the Development of Presidential and Specialized schools under the Cabinet of Ministers

ZAMBIA: Moses Phiri, Assistant Director, Ministry of General Education

ZAMBIA: Raphael Banda, Acting Senior Curriculum Specialist, Ministry of General Education

ZAMBIA: Billy Jere, Programme Analyst, Ministry of General Education

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

DISCUSSIONS

SECTION 2. Discussion

2.1 Opening Statements

The opening statements were provided by HE Dr Abdulsalam Al Joufi, Deputy Secretary General of the Arab Bureau of Education for Gulf States and Former Minister of Education Yemen; Rt Hon Charles Clarke, Former UK Secretary of State for Education; and on behalf of the Georgia Minister of Education, Dr Berika Shukakidze, Head of the Georgia National Centre for Teacher Professional Development.

HE Dr Abdulsalam Al Joufi

Dr Al Joufi firstly addressed how any discussion of teacher training needs to be in the context of overall teacher policies, teacher selection and pre-service qualification. From recent experiences we have learnt the need to ensure that teachers remain motivated with good training programs, career progression and potential bonuses for their outcomes. Included in this now is the need for the upskilling of teachers in 21st century technologies and digital education. The last year, impacted by Covid, has exposed a skills gap in digital literacy, although teachers have caught up rapidly as the needs of remote learning have determined.

A holistic approach is required that involves the participation of all stakeholders and particularly what we have witnessed during the pandemic is the greater role of parents, especially in supervising young learners at home. Hence, the local community and the well-being of students while engaged in remote learning creates a new pressure point for teachers, a new area in which they must be prepared for local problems and needs. Equally, teachers wish to be creative and inspire their students. Yet, the demands of teacher training, continuous development, administration, intensive teaching can limit the scope of creativity. The experience in GCC (Gulf Cooperation Council) countries in dealing with this is to have the right institutes within the ministries of education. All the GCC countries now have specialised institutes for teacher training whereby all the programs are integrated with the overall education policies of the government and partnerships with faculties of education.

The challenge being noticed in some GCC countries is maintaining the motivation of teachers in attending regular training programs. The teachers themselves need to be able to identify how such programs and teacher training credits relate to their career opportunities and professional development. There needs to be a better link between training and career progression. The importance of meetings, such as today, is to develop partnerships, such that stakeholders can work to support the teaching professions and work to provide constant guidance on overall education policies. Regarding accreditation, there is an ongoing effort in the Gulf States to encourage more networking amongst the teacher accreditation centres and certainly there is an opportunity to unify training programs where appropriate.

Dr Berika Shukakidze

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

Dr Shukakidze joined the meeting on behalf of the Georgian Minister of Education, HE Mikheil Chkhenkeli, to present some key points around evidence-based teacher professional development. In Georgia they have 2,083 public schools and recently asked them to complete a survey around the needs of the teachers, in which 1,783 schools completed the questionnaire – covering 93% of the teacher population. The entire population of teachers in the country is 57,127.

The purpose of the questionnaire was to help the government design policy and design appropriate teacher training programs. The professional development needs assessment was aimed at determining priorities in inclusive education, professional competencies, literacy, STEM education, digital literacy, civil society (safe school, human rights, democracy, and sustainable development), ICTs and research. The top five priority areas were STEM teaching methodologies, information and

communications technologies, research, inclusivity, and digital literacy.

This information from the needs assessment helped the ministry of education in designing their teaching policy. This also includes the need for a strong program around school leadership and ensuring that the training programs support principals and senior teachers. The priority areas can now be aligned around special needs education, ICT for education, subject training, didactics, and research.

From the information produced by the needs assessment the ministry of education is now developing a platform called the "Education E-House" – see slide 6 of 6 in appendix A. This includes a National School for Principals supporting general management and education leadership, National School for Teachers helping with subjects and didactics and a School for Parents to provide information on the role of the family and parental involvement in school education.

For teachers there is to be a strong emphasis on training in special needs education, didactics, subjects, and ICT for education. The education policy now includes a teacher professional development scheme with three categories: head teachers, senior teachers, and mentor teachers – each with an allocated number of hours training qualification. By putting such a framework in place, Georgia can move from a centralised training system to a robust school-based professional development system, with quality assurance teams embedded in schools.

Rt Hon Charles Clarke

The key to educational performance is having high quality teachers and their motivation, partnerships and leadership are all key to ensuring that the teaching community can deliver to meet the challenges of our time. The case for robust continuous professional development (CPD) is unquestionable given the huge changes that take place during the 30-to-40-year career of a teacher. Hence, it follows that for teachers to keep up with the changes then they need the continuous training throughout their lives. Now, the case for online CPD is exceptionally strong.

Of course, Covid has had such an impact in the way teachers will teach, yet there are many situations which need online teacher training across all grades. There is no single, universal model for CPD, and policy makers must consider the entire teaching and school environment in which the case for robust training extends to leadership and support staff. The delivery of CPD can be direct to teachers – it does not need to go through the school, it may be local education authorities of government ministries of education. Hence, it is necessary to have a teacher training system that is tailored to the teaching needs of each particular country.

Good teacher training models should include incentivisation and that CPD is a requirement of employment to protect the teacher's professional career. Accordingly, assessment and accreditation are necessary components of professional development. To build greater institutional resilience into the education system, one needs to analyse all forms of accreditation and CPD that match the ultimate aims of the policy makers. Incentives cost money and this can be achieved through a mixture of resources from government, municipalities to individual schools. Even teachers may possibly pay for their CPD so long as they can see that it is a personal investment that results in returns in terms of their career and job progression.

Whichever case and model, it is essential for policy makers to make the public argument for committing to online teacher training and online CPD, especially to ensure resilience, to protect against future shocks and ensure the education system is not vulnerable during times of financial constraint. The best thing to do is to have multiple sources of finance to fund CPD at national and local levels.

Furthermore, stakeholder collaboration and partnerships are key ingredients – such as the role of teacher unions in supporting CPD. With the support of unions, it helps give guidance to the question of when CPD should be done. When and how should teacher training be delivered? Does it have to be at schools, or could it be at weekends or during holiday periods? There are many options, but these can only be addressed with the collaboration of stakeholders.

Equally, a good approach to accreditation is necessary along with a focussed approach by governments and schools to what kind of teacher training is required in each country or local community. This requires a strategic approach to policy making with foundational principles and robust pedagogical frameworks – globally this is a challenge in reforming education to adapt to online and blended learning. Each country has its own teaching system and its own internal challenges. There are no universal answers but by focussing on these key issues of collaboration, accreditation, incentivisation, career progression and adapting pedagogies to the virtual learning environment can all form the basis for national ministry of education policy making.

2.2 The Response of Teachers to the Pandemic

The importance of teachers being empowered with the skills and strategies before they enter the classroom is such that it entirely underpins the quality of teaching schools. The 'new normal' has changed some core competencies, yet the aim remains to have students who graduate from school with problem solving skills and being able to adapt to the ever-changing jobs market. The success stories during the Covid pandemic have been those of teachers being adaptable, innovative, and creative in a very short time. The knowledge and information is everywhere, it is the shift in mindset and responding to the needs of the digital generation that is having the biggest impact on teacher professional development.

The meeting addressed multiple issues: the different modes of learning, the need for structure and coherence in CPD and making sure that all parts of the system work together without contradictions. As inspired by the opening comments from Dr Al Joufi, teacher motivation is a key issue, especially under current circumstances where stress levels and demands upon teachers are high. If the system is going to motivate teachers then both the inspection systems and reward systems need to fit with the desire to improve skills and capacities. If we design something that fits the needs of the teachers, then they will be motivated.

One of the most outstanding sentiments of this meeting was how all in education have risen to the occasion and learnt from one another over the last year. Everyone has seen the negatives and the disruption and are now learning together to get better. As these online meetings amongst officials and educators have progressed from shock to confusion to problem-solving, we have seen a steady stream of good news stories. People talk of 'Zoom fatigue', yet at the same time we have adjusted and gained a great deal from the necessity of being online. Habits may have been broken and the home-life balance completely disrupted but seemingly teachers, just like the wider world, are talking more to each other than ever; and policy makers from different countries are collaborating more than ever. Some have even spoken of how teachers, once resistant to edtech, have really enjoyed the online training sessions and learning how they can leverage the technology to their advantage. It is not only about teaching, but also about learning and they are learning something new now.

What we have seen in the last year is how teachers have moved out of their silos within the classroom and are collaborating more – amongst themselves from within the same school and between schools. This is a real shift in thinking within the profession. It has not been driven by policy but out of necessity. People are coming out of their cubicles and asking questions more – even questions about the nature of education and the re-designing of lessons and assessment. The skills needed for teaching content are very different to skills needed in today's world. So much more collaboration among teachers, governments and the private sector are part of several things that were not seen in the past.

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 time needs to be used wisely to put the right structures in place to ensure all teachers obtain uniform standards.

On the issue of motivating teachers in professional development, one of the new challenges is the availability of online tools to support teachers and facilitate their CPD. Many teachers, especially in emerging countries, do not have the necessary devices and equipment as well as ongoing connectivity issues with the ICT infrastructure. In Botswana, they are developing new in-service training programs to adjust to the post-Covid world and demands of online education. In response to the infrastructure issues, they have set up the Botswana Research and Education Network to improve connectivity.

Concern remains over the pressure that teachers are facing, the children are tech savvy, and often the teachers may feel that some students are better than them at using technology. What is important here

is to implement programs with more instructional designers who are available within schools to support the teachers. It is not practical or reasonable for all teachers to themselves be instructional designers, but it is essential that the support mechanism are in place. In terms of professional development, the challenge many people face is having the capacity to build expertise around high-quality online teaching, because currently there is a great variance in quality and furthermore it depends on the type of edtech that has been employed.

Several participants spoke of the good experiences they have had in supporting teachers and responding to the new demands and that countries should share these beneficial lessons, especially in regions with common language and practices. For example, Arab countries could share professional development programs and in fact we have seen organisation such as the Arab League Educational, Cultural and Scientific Organisation (ALECSO) implement cross-border teacher training and professional development activities. As well as supporting the teaching profession, such cooperation can expand to greater collaboration and the sharing of resources amongst senior policy makers in government.

In Armenia they noticed how much there has been a boom in online professional development because there are so many free resources available online. With the country developing more of their own online resources, the system has really helped the educators reach out to teachers and leaders in schools, and vice versa. This has been enhanced with teachers sharing their experiences and particularly for those with lesser skills in digital education they have benefited from collaboration and teacher development groups.

Those participants in the meeting who work in schools had plenty of anecdotes that talked positively of how teachers have adapted and that the pressure placed on everyone by the pandemic has been met with amazing fortitude and creativity by those in education. One nice example in dealing with teacher well-being, in Bangladesh they implemented a tele-conversation model with the teachers that developed content around healing and learning. They focussed on a play-based pedagogy, how at home parents can support their children in learning by engaging them in different kinds of play and then incorporating the psychosocial support – the healing element (which may even involve breathing exercises). Now they are planning to design a model based on the success of these virtual innovations. Would this have happened pre-Covid?

In Ghana, they have the National Teaching Council which is responsible for teacher education and professional development. The country has 16 regions in which there are local structures in place to enable teachers participate in professional development without losing teaching time in the class. The Council has put in place several strategies that encourage teachers to take part in CPD, as well as ensuring that providers are well qualified and certified to provide teacher training services. Ghana is also looking at professional learning communities (PLCs), to ensure that development takes place in schools.

The government in Nigeria only insisted on teachers being licensed in private schools in the last few years and prior to this many people got into teaching through private schools without the requisite teaching qualifications. By the end of 2019 it was compulsory that every practitioner be licensed and registered with the Teaching Council of Nigeria. In the public sector there is a huge wealth of training that goes into public school teachers, but there no private organisations that provide training. Public school teachers are required to attend a certain amount of training each year as part of their appraisal process. The country is now seeing a growth in teacher organisations who have been sharing their experiences of online teaching and pedagogy more recently.

Generally, as many participants commented on, in response to the huge disruption to school, teachers have responded as creatively and innovatively as possible with the tools available. The world has spoken of digital transformation for the last two decades, yet both the current technological tools are inadequate for the education sector and education itself has lagged on picking up the digital baton. The seriousness of this situation and the inequality of access has been brought home by Covid that everyone's eyes are now open such that education policy urgently needs to catch up with practice. Countries and institutions should now be thinking clearly of creating world-class digital platforms with all the materials and all the tools for teachers such that they can move forward, focussing on the best pedagogies and learning outcomes unfettered by a 'bad connection'.

2.3 Managing Change and New Dynamics in Teaching

Education has moved on from just focussing on subjects and being a knowledge-based system; in addition to subject competencies there is now the need to equip students with core skills around critical thinking, problem solving, leadership and communication. The entire ecosystem is changing,

accelerated by Covid and the need for digital transformation. The key concern is that without a change management strategy, the teacher can become the bottleneck in this transformation. Yet in most countries, teachers are overloaded with work and underpaid. In the UAE, teachers were on the lower side of salaries, but the government recognised this and instituted a reform of the teacher training and licensing system that allows for tangible career progression. The outcomes are already being felt in terms of international indicators for the country.

The paradigm shift is that teachers were taught in colleges of education, they were taught face-to-face and taught how to teach at the front of a classroom. Now they are facing whole new situation where they need to deliver lessons online, engage students in a whole new environment and still maintain learning outcome standards. Teaching online, recognising issues of student well-being, designing lessons that engage learners and moving from more summative to formative assessment are all major challenges that were simply not addressed during pre-service qualification. In-service training is currently in flux and continuous professional development needs to adapt quickly; all while there are deep concerns over infrastructure and the dangers of a digital divide. This is the true paradigm shift for the teaching profession. In South Africa, all their teacher training programs are face-to-face whereby teachers may come together over a weekend as part of their continuous professional development and to attain the points that count towards their career progression. With Covid bringing a stop to this, they had to act quickly to convert content to a digital format. The challenge then became a matter of access and being unable to reach all the teachers all the time. They started working in partnership with the South African Broadcasting Corporation (SABC) to showcase lessons on channels and made use of community radio stations in which teachers physically went to the local station to broadcast lessons. The other big challenge was teachers being able to have access to online tools and the cost of data. An important consideration for all governments has been the loss of learning and how to implement some form of 'catch-up' program for learners. Schools have had to re-align their calendars and rotate attendances for students to comply with Covid regulations. In South Africa, they witnessed far greater parental involvement, coming to schools to collect materials, and communicating more with the teachers. In terms of professional development, they are now looking more at the micro-credentials of teacher competency and designing programs that support greater digital literacy. Everyone has had to change their mindset, planning for a more permanent virtual environment, and appreciating that it is going to a long time before large face-to-face training sessions return.

Ghana's comprehensive transformation of teaching policy and professional standards began a few years ago to ensure up-to-date competencies and manage continuous improvement as part of their overall strategy of improving the country's educational system. They also developed national teacher standards and a licensing program alongside their CPD system. This changed the whole dynamic in the way school leaderships manage teachers. In response to the urgent need for accelerated digital transformation they have developed a new curriculum for pre-service teacher training. Covid introduced a new dynamic, especially for remote teaching and learning competencies. Now a huge effort by the ministry of education is being implemented to help teachers acquire the competencies for blended learning. This should be in harmony with the new demands of the fourth industrial revolution and the need for more critical thinking and communication skills. In Ghana they now believe that in a strange way, Covid has strengthened their hand in building more resilience into the system, preparing for the future, and facing any new emergency.

The UAE has a unified inspection framework which includes a professional development requirement. Though in-service teacher training is not contractually required, the government inspection program expects a minimum level of CPD of 20 to 25 hours a year, per teacher. Due to the pandemic, they have moved to a lot of online professional development, which has opened new opportunities such as schools sharing their practices. Furthermore, the UAE has for a few years been developing a licensing system for teachers where they take a series of exams and more recently they have implemented licensing for school principals and vice-principals. In response to the pandemic, the teaching community has been highly

motivated to meet the challenges and solve the new day-to-day problems they are faced with. The first challenge was getting everybody online for distance learning, then secondly, was figuring out how to best do blended learning. This has all created a new type of motivation within the profession with teachers working harder than ever to ensure the continuity of education and maintain pedagogical standards. The crisis has motivated teachers to attain new levels, especially for distance learning strategies.

The demand for continuous professional development in Zimbabwe is very high, particularly since they implemented the new competency-based curriculum which has impacted the work of over 120,000 teachers. Their competency-based Education 5.0 is linked to industrialisation with STEM education being a core component of the new curriculum. Hence, the CPD programs are focussing heavily on competencies in the sciences, engineering, and mathematics. Now the supervisors and mentors are assisting more in the use of ICTs in education and how to effectively deliver online lessons. Not every teacher is competent in the new technologies, but certainly Covid has accelerated the drive to improve this aspect of professional development, along with coordinating with the higher education sector and the post-graduate qualifications in education and teaching.

In Georgia, they have learnt that teacher mentoring is a key element in any successful professional development program. The induction program for young teachers includes them having their own mentor to support them in the professional development courses and the in-classroom experience. Leaving these young teachers alone without mentoring will increase frustrations and result in more leaving the profession. They are extending this to their school principal professional development program and are introducing mentors for principals.

Somalia has also noticed the challenge of having to upskill the teacher trainers, many of whom did not have the required skills in using ICTs in education. Many of the trainers are of an older generation and hence dealing with an in-built resistance to new technologies is also something the ministry of education has faced. They are working to encourage a new mindset where people do not fear online systems and virtual learning. One method is to divide their teacher training between face-to-face tutorial support and online learning materials. Of course, the challenge of internet connectivity outside of urban areas remains.

Cote d'Ivoire has a partnership based on the UNESCO ICT Competency Framework for Teachers. When they started teacher training online they found there were not enough open and free educational resources in French. Although offering a platform available 24-7 to teachers, it is not easy to find the resources that are accessible and adaptable to the requirements of a Francophone West African country. Furthermore, they are dealing with changing mindsets, moving from out-of-date curricula to a more student-centred model at a time when teachers need to adapt to an online mentality.

Teacher trainers who are effective face-to-face may not necessarily be equally effective in delivering virtual training programs for teachers. It is a different ballgame. The challenge for governments is not just the upskilling of teachers but the urgent investment required in upskilling teacher trainers – especially in online pedagogy, child engagement and virtual lesson design. Many countries have implemented cascade systems of training the trainers and recognised the need to have more mentoring and coaching sessions with trainers such that they can measure the trajectory of growth. It is important to have feedback mechanisms so teachers can respond with their own comments on how effective the virtual programs are. Reforming teacher training in such a manner should also include the introduction of softer skills training, as educators have found that resilience, agility, and emotional intelligence are key to teachers making the transition.

In South Africa they have noticed how a whole variety of new distractions reduce the focus and motivation of teachers during ongoing professional development. The Covid disruption has brought into play new concerns such as health protocols and access to healthcare advice, personal issues, the demands of shifting online, dealing with parents, and trying to keep students in the communication loop are all factors that can escalate teacher stress and distraction. They have found that teachers are more focused on the programs when they can access systems and support mechanisms to all the things that might bother them. At the same time, the departments of education must investigate compensation and be sensitive to the career motivation of teachers.

As well as Covid, Lebanon has faced enormous challenges in the last year, including a particularly dire economic situation. With the support of UNICEF, they have managed to develop a fully-fledged platform to support teacher training which operates alongside a new approach of competency-based teacher training. They have re-designed whole training programs and redeveloped training modules that abide by the competency requirements. In

establishing the platform, it was also important to look at need's assessment – what the teachers need, especially in light of confinement and lockdowns. There was also the decision to include new self-paced training modules on the platform that allow teachers to do whole modules without support and in their own time. To ensure long-term motivation of teachers, such new online innovations within the profession need to be accredited and thus linked to professional development awards.

The UAE added the number of training sessions attended to a teacher's evaluation two years ago and they have seen teachers trying to attend as many training courses as possible for their career development. Also, the training courses that are mainly available are designed to support their teaching message, so they are willing to attend because they notice how it supports them in their daily activity at school. Furthermore, the ministry of education carries out a needs assessment before presenting any training courses, which further motivates teachers to attend.

Regarding the difficulty of monitoring and measuring the progress of CPD, especially in the online context, there is a danger of trying to be too detailed, too precise, too soon such that it inhibits doing anything at all. Performance indicator measurement is notoriously tricky within the complex framework of teacher development and the most important thing, motivationally speaking, is to make sure that teachers feel part of a group that is trying to improve professional quality that ultimately improves educational outcomes. Whenever collecting and assessing data it is necessary to determine in advance what does one want to get out of the information and exactly how do we demonstrate improvement. The most critical aspect is that teachers and their colleagues are engaged in the process.

2.4 Digital Education and Online Learning

It is striking amongst so many countries and educators how the changes to teacher professional development, pre-service training, and the associated new competency-based curriculum, were already underway before Covid. The digital transformation and new technical competencies have been long spoken of but the pace of change in education, especially outside of urban areas has not matched the change we have seen as the 4th industrial revolution picks up speed. It is this digital transformation which Covid will certainly accelerate so long as investment in the ICT infrastructure is upscaled. The shift to online learning has often been discussed but not truly envisioned. As the pandemic has forced people online, in fact we have seen the teaching profession respond with a sense of urgency and have been creative in adapting to the new normal.

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 were taught how to teach in an online classroom. Thus, there is 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 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.

Covid has brought many lessons – not least of all that digital learning is now non-negotiable and that we must embrace it to bring the most benefit to our kids. One of the big concerns voiced by teacher unions is the inequality of access and danger of a digital divide. This is reflected in Ghana where the government has been doing well with WiFi for

schools yet more needs to be done for in rural areas and especially for residential access, such that nobody is disadvantaged. Teacher unions are also concerned with the emotional and intellectual competencies of the teachers. Beyond content knowledge, the skills for social and emotional learning are especially relevant when introducing blended learning and supporting students from a distance.

For those who have participated in online training recently, at first it may not be the easiest of platforms, but the sessions have been engaging and interesting. The trainers have responded well by designing sessions to be as interactive as possible and most commonly the first available tools are what have been used most – *MS Teams, Google Classroom, Zoom Video* etc. Of course, these platforms will change over time, the edtech and software industry will produce new innovations and respond to the demand for an immersive online education experience. This is inevitable, which means continuous professional development that includes updates on technology is essential. This is how it happens in the business world, and there is no reason teachers should get left behind. Over the next couple of years, we will discover the possibilities of doing things better online. Face-to-face education is as old as the hills, online learning has been spoken of over the last 20 years but only really taken seriously over the last 12 months. Everyone is now obliged to be online.

When the Covid crisis started, the UAE was in a relatively strong position in terms of having a mature ICT infrastructure and several strands of government policy already in place regarding remote and e-learning. The country's ICT fund had already been well-established since 2012. There was not a substantial disruption to the education system, maybe just a week or two as people and institutions adapted to the changes. Schools and universities were in a strong position to switch to remote learning during March/April 2020, but this was not necessarily smart learning. The government immediately stated that education must continue, and so it did. The standards for smart learning had already been in place since early 2019, with technology implemented over the previous six years. Within the UAE curriculum they started 'Fab Labs' several years ago, with the purpose of introducing new digital technologies from 3D printing to coding software design. There is another stream for STEM education that is also embedded within the curriculum and introduced coding from Grade 1. The aim is to combine knowledge with science and technology to build the capabilities of the students and present them with real world problems and not just the theoretical aspects of the curriculum.

In Lebanon they have innovated the use of digital badges, whereby if a teacher has attended specific training then they receive a digital badge as certification. The country has received funds recently from international donors that have supported teacher training, yet it essential that this sits within a framework along with a well-managed database to keep a record of attainment and skills. UNESCO has developed the ICT CFT framework for teacher development with about 18 core competencies for teachers, who can acquire different levels of knowledge acquisition, and knowledge creation. Any such framework must carefully consider the designing of online course and the pedagogical application of digital skills.

Since 2018, Saudi Arabia has implemented a nationwide project under the Ministry of Education for the teaching of digital skills. The main goals have been to provide students with computational thinking skills, programming skills, physical computing skills and to promote the responsibility of digital citizenship. The Covid pandemic demonstrated the need to have these skills in place and fully justify long-term investment that includes teacher qualifications in digital literacy and providing the appropriate equipment for supporting student creativity. The Ministry of Education has also established a national open education resource platform for teachers to share their presentations, lesson designs and establish their own professional learning communities.

Educational institutes such as the Arab Open University have responded to challenges presented by the pandemic by increasing the use of online tools and arranging professional development sessions on topics that respond to the new paradigm. These may include how to improve online lessons, or how to best utilise learning management systems, appreciating the balance between synchronous and asynchronous learning, and having the competencies to construct robust online assessment. Teachers can use the video applications to share their experiences and the feedback from students allowing a constant flow of exchanging ideas and keeping parents informed.

Education is a fundamental social activity and face-to-face learning is essential to the social interaction of students who need to work with each other in a school environment – apart from all the other benefits of pastoral care. Critical thinking, creativity and collaboration are promoted through face-to-face learning, yet the question needs to be asked is how online learning can also promote these skills in

different ways? That differentiation between face-to-face and online in achieving core outcomes is a key part of understanding how to design a policy framework for blended learning.

The pedagogical challenges of conducting an online lesson remain. The conditions change completely for the teacher, conditions that have never been trained or prepared for: the home environment of the student – is it a good learning space? Just turning the camera on or managing to read body language of sometimes multiple fuzzy faces, creates a lot of difficulties for teachers. Then there is the actual cognitive presence of the students. How much are they learning and what tools does the teacher have to answer that question? The teacher, along with subject knowledge, having new technical competencies, transmitting knowledge, is also having to create a social environment in the virtual world. Teachers have responded where 'necessity is the mother of invention'. They have become online family counsellors, and absolutely need the support from school leaders, districts, and government because the psychological pressure can be overwhelming.

Toolkits for online learning are useful for parents as well as teachers. Parents need to know how to respond to their child's emotional state of mind, who may show behavioural changes due to spending a lot of time sitting in front of a laptop – sometimes introversion, sometimes aggressiveness. This entire socialisation aspect of online learning and pedagogy needs to be considered. In Armenia they looked at three different levels of socialisation: physical presence at the start of the lesson, social presence in terms of their interactions with the teacher and other students, and cognitive presence – particularly how to achieve an enquiry-based online environment.

They also worked on a balance between synchronous and asynchronous methods, such as physical education and encouraging the students to close the laptop, go outside and do some exercise. The tools for synchronous and asynchronous teaching proved valid and very useful.

Another perspective of the influence of Covid on thinking, is that it has been an opportunity for people to re-evaluate the significance of technology, how it can be used in education and how we cannot progress without integrating it both effectively and ethically. Equitable access is now an essential priority and an agenda that stakeholders will need to continually push to ensure the right to education is matched by the right to access – especially in a world of blended and hybrid learning.

A more blended learning future will inevitably impact upon pedagogies and classroom management as well as demanding new skills of the teachers as part of their continuous professional development. A mix of face-to-face and digital learning has considerable implications on CPD, certification and the awarding of CPD points that underpin career progression. The big policy question is how do we create a culture of active learning and encourage students to actively engage, particularly through the new media, video, and e-learning platforms? Answering this question will lie at the core of new professional development programs that incorporate blended learning and new digital pedagogies.

2.5 CPD Policy in a Post-Covid World

Everyone agrees that teacher professional development now must viewed through the lens of a post-Covid world and how previous norms have changed fundamentally. Countries experienced major disruption to the whole process of the value chain of education. We now need to revolutionise our norms to think of new and effective ways to continue the upskilling of teachers. All ministries of education and schools realised the gap in the digital literacy of teachers and the necessity to deliver online training and live workshops on digital education. In the short-term this has meant focusing on training in the use of existing platforms and technologies. Now people are developing new tools and tutorials to enable staff in schools to learn online teaching skills. For policy makers it is very important to conduct a needs assessment because of the wide range of technology-

based competencies amongst teachers – which then becomes an opportunity to assess and even restate their vision of the education system and its continuing evolution in the digital world.

The major pressure for all teachers was the need to deliver online lessons with no training and with no institutional playbook. Teachers have been very creative and adapted to the new circumstances, yet online learning does need substantial improvement in design, pedagogical practice, and far more interactive technologies. Such adaptations are required at a time when educators and policy makers have already been implementing more student-centred learning and moving away from the old-fashioned teacher-centred practices. In the post-pandemic world this needs to be taken into consideration when developing blended learning practices.

The mental health and well-being of students, along with the increased pressure on parents has been apparent for everyone. As well as teachers sharing content and resources they have also been sharing their experiences in recognising the mental health of students and the different situations in homes, because a safe and stable learning environment is essential for well-being. Mental health has certainly become one of the major issues of the pandemic's impact on education, which is forcing policy makers to give greater consideration to social and emotional learning in the digital world. Another whole new set of skills for teachers.

In Ghana, they have developed a teacher professional development management policy with approved national standards that has resulted in reform of the pre-service teacher education sector and introduced CPD qualifications for in-service teacher licensing. They have also established professional learning communities across the country where teachers come together to share in their competencies with weekly professional development sessions to learn new online teaching techniques.

In education in Saudi, they have responded positively in seeing how the Covid pandemic can become an opportunity for the better use of technologies and for teachers and instructors to be enablers. The Training and Vocational Training Corporation has 200 centres nationwide that train the trainers and instructors in technology and learning management systems. They have also taken the time train the students in how to use the technology and utilise virtual platforms. There remain challenges, such as the delivery of e-content; even though they have numerous courses it is necessary to encourage the teachers to develop their own content. The concern is not so much the technological capabilities to continue with e-learning but rather the regulatory framework. E-learning did not previously have approved accreditation and because of Covid, now the government has started accrediting e-learning.

Oman has long recognised the importance of teacher training and their Centre for Professional Development provides certified short and long-term training programs. The Ministry of Education has upscaled the online training programs through their e-learning platform and increased content covering classroom management and teaching strategies. Post-Covid, most of the face-to-face training programs have shifted online and training is decentralised under the administration of regions with their own training centres and a new emphasis on digital literacy amongst teachers.

There is a growing sentiment that teacher professional development courses need to adopt a framework for assessment competencies, as well as the utilisation of ICTs for the purpose of teaching and learning. Here it helps to have strong collaboration with external providers and universities to evaluate such professional development courses. Frameworks should be also adapted for differing parts and stages of the profession, such as principals and school managers.

Whether evaluation competencies should be a part of pre-service teacher training, raises the broader question around the shift to competency-based curricula and formative assessment that we are seeing in so many countries. There is a sense, that in the future, we will see more certification of evaluation and the teaching profession will evolve more around project-based assessment. In response to the disruption caused by Covid we are already seeing many countries implementing grading this summer to be done by teachers, replacing exams.

Several participants in the break-out groups reflected on the point made by Charles Clarke that huge social changes take place during the career of any teacher which is why continuous training is required just to keep up with those changes. Covid has accelerated change, compressing demand for new programs, reforms, and digital transformation into a very short period. Policy makers must be cognisant to the fact that teachers need training all the time, it is a continuous process and availability of easily accessible resources is essential for teachers to continuing evolve with the times. An important policy recommendation is for governments to ensure they update their compliance frameworks for CPD to account for digital skills and online teaching

competencies. Professional development providers need these guidelines, and the policy framework is necessary for accreditation.

This helps decentralise the mode of delivery and gives teachers the reassurance of standardisation. The call for compliance and accreditation frameworks fits into the bigger picture of overall government policy for online learning – including the necessary teacher training and professional development to deliver such a policy. Policy makers need to be cognisant of how every new technology in education, first needs technical training before changing teaching methods. Then addressing digital pedagogies that deepen learning along with teachers having the skills to change lesson designs all need to be part of a coordinated change management strategy.

All ministries of education who participated in the meeting expressed how they are having to adapt their face-to-face teacher training programs to online. In Oman they have the specialised centre for teacher training which has strategic programs over four semesters and shorter training programs the last for a few days. Of course, with the onset of the Covid pandemic, many teachers would have been just part way through the strategic programs, so these were shifted online using existing tools such as MS Teams or Google Classroom. Yet, the trainers themselves also had to quickly adapt to the online environment and be trained on the use of different platforms and technologies, which took about three to four months. Now they are seeing confidence growing amongst the trainers and mentors.

Teacher professional development is highly complex and a big area of challenge, as pointed out in Western Cape, is monitoring and evaluation. The nature of teacher training and CPD is such that the outcomes and effects are not seen at the point of delivery but further down the road as the teacher masters the art of implementing so many professional competencies. How do policy makers see where training is affecting learning outcomes? What are the success and key performance indicators? Answering such questions is especially harder in non-subject related training, such as developmental or leadership programs. With the sudden impact of Covid and the need for more online training then it raises other questions of how to use current capacity to develop new training methods for new needs that are very different from previous needs and their associated methodologies.

In South Africa, all qualified teachers are registered with the South African Council of Educators, and continuous training has only been a requirement since 2014. Online training is slowly being implemented, though is a bit ad hoc currently and not yet compulsory. This is the kind of training done by a centralised institute and there is also training done by subject advisors which does not reward teachers with CPD points. Although the digital development of teacher training in South Africa is happening, it will not be long before there are calls for digital and online teacher training to be compulsory with assessment to find out the benefits and value of the training.

A few of the participants spoke of how the cascade model of teacher training has not worked in their countries. The problem is that teaching, and all the required skills is highly complex, starting with subject-based training to social and emotional

training and then onto virtual learning training, the range of competencies is vast. The weakness in the cascade approach is that it simplifies each component part of teacher professional development that is then further simplified as we cascade down the waterfall. By the time we get to the third or fourth layer of trainees in a cascade model, so much of the important content and knowledge has been diluted. In Sierra Leone they have realised this and taken the approach of having a strategic framework with professional standards that clearly state the career progression. In Ghana they have also noted how the cascade has not worked very well. There, the schools organise their own teacher professional development, especially at the beginning of each term. Once teachers are up to speed they then start an agreed program of development prior to the full return of pupils.

2.6 National Responses and Initiatives

Many of the meeting participants spoke of how the teaching profession and the ministries, in response to Covid, reacted first with the technology that was at their fingertips, including social media platforms to communicate with students and parents, as well as amongst themselves. Little by little we are seeing how ministries are developing new ambitious initiatives in the face of reality whereby the world has seen the demand for 10 years-worth of technological change effectively crammed into a few months. In countries like Morocco, we have witnessed a real drive from the government in enabling online education and developing special modules for teachers on how to work in a virtual learning environment.

The disruption caused by Covid in Bahrain was met with the government forming a national committee, having robust cross-communication between different ministries to ensure that progress was monitored and after the first couple of months directives to school leaders were clearly communicated. The first instruction was not to stop any kind of teacher training and to put in place solutions to overcome the challenges during school closures. This included online training and collaborations to develop new online courses. This multi-stakeholder approach involved the ministry of education, the regional centre for ICT and UNESCO; all collaborating in a manner that provided an experience the country can leverage when coping with future shocks to the system.

Pre-Covid, Kenya had already made reforms to pre-service teacher training and started the integration of ICTs into the teaching profession. This was required to complement the digital literacy program that was rolled-out, starting with primary schools, to bring digital skills into their competency-based curriculum. Teachers were trained in the use of technologies in the classroom and, of course with Covid, they were no longer in the classroom, so the ministry of education had to ask the question how they continue this ICT for education integration. What happened was that practice then moved ahead of policy – teachers coming together to share their experiences using the platforms such as Google and MS Teams and social media (such as WhatsApp) to communicate with students.

Kenya's Covid response policy for the educators had to consider how teachers coped with learners coming back to the classroom after such a prolonged break, in a situation where the world was still fearful. So now we are seeing a teacher who is re-tooled, thinking about more than just their lesson plan, but the wider considerations of student well-being in the classroom, the following of Covid health protocols and applying blended learning techniques when students are using their devices at home. For policy makers it is necessary to understand how the students interact with their devices and to make sure teaching capacity is developed to respond to the change and have access to continuous development programs that support their need to implement new competencies.

In Jordan, in response to the pandemic they noticed how teachers needed quick solutions. They quickly developed live video sessions using online media, including Facebook and YouTube, which supported urgent requirements such as the engagement of students and dealing with assessment of learners online. Then they developed new CPD programs for the teachers, particularly focussing on how to deal with kids online, how to interact and how to assess. Jordan also reached out to other countries to share experiences. Such international collaboration in education barely existed before the pandemic and now we are seeing more of it.

In Nigeria, they responded to Covid with a variety of actions, and one important thing they noticed was the need to have a continuity plan to better prepare for disruptions. These lessons apply to online learning which is vulnerable to technical disruptions alongside the challenges of access to devices and robust broadband connectivity. It should be noticed that these disruptions are also influenced by the age of the learner, where of course younger students need more parental supervision while learning online. Both private and public schools are now holding more regular performance indicator meetings such that they know the urgent areas that need addressing and where teacher training needs a particular focus. Periodic surveys of staff members and parents can also help refine teaching policies, especially around the delivery of online pedagogies.

In Albania, they are working on reform of teacher qualification and in-service training with a national level program to prepare teachers in ICTs and the use of different platforms. They currently have a national e-learning platform for distance and online learning – developing programs to ensure that all teachers have the necessary ICT competencies and can use the system is the biggest challenge currently.

Armenia also has a national reform project to establish a new competitive curriculum in which one of the main components is teacher development. This has already brought about changes in the procedures of CPD and they wish for legislative change that enables opportunities for people from

the private sector to get into teaching and contribute to an improvement in quality. They recognise the importance of developing meaningful career ladders to help motivate teachers. With the onset of Covid they have switched to online training and started developing new training modules for planning online lessons and how to use the various tools and technologies.

Georgia has introduced a system for career progression in which teachers obtain credits leading to posts such as senior teachers, mentor teachers and school principals. Such merit-based systems have taken time to develop culturally, given the very different previous Soviet system. Teaching salaries have gone up and they are noticing an increase in Georgian university students who wish to join the teaching profession. The National Centre for Teacher Professional Development aims to show society that the teaching profession is valued, respected, and has a high social status.

Senegal has just one main teacher training institute and along with poor connectivity in rural areas, they had to implement a mixed program of face-to-face training for those who did not have access and online training for those teachers with the requisite power and internet coverage. Here they utilised MOOCs and leveraged the resources of the Virtual University in Senegal, which is a major player in the pedagogical transformation of education in Senegal. The online training has been extended across the country since the outbreak of Covid with some sessions recording more than 100,000 teachers at a time, participating in new practical modules for using digital technology.

Jordan has formed a national committee for directing online learning and for the schools and universities to work in the standard and unified way. 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. 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. They receive a workshop and then use that to give their own workshop to lecturers and teachers.

The Queen Rania Teacher Academy (QRTA) in Jordan provides in-service training for teachers as a CPD program and has a system of certification the same as the ministry of education – allowing teachers promotion. The training programs were originally designed in coordination with Columbia University Teaching College, New York and follow a well-practiced international set of standards for awarding diplomas. The QRTA believes in the community of practice. So, in their training they build a community practice between teachers in the school and schools in the district which requires involvement of principals. Accordingly, they provide training for principals and senior leadership teams of schools. It is a method that builds relationships, promotes knowledge and good practice in the schools. Covid meant transferring the training model online, yet not forgetting this principle of community of practice, they utilised the various applications to maintain teacher and school communities.

Covid has inspired a rapid reaction amongst everyone in the education system from schools to government to those in industry that have collaborated, including the telecommunications operators – though far more work on connectivity needs to be done. Maybe this is what we can call civil society or social responsibility that those in education can be proud of. The work of educators and policy makers in the last 12 months has been commendable. People have formed new working groups, collaborations, the sharing of resources and experiences and a huge effort has been made to get up to speed in digital literacy. From crisis to opportunity – now there is opportunity for the technology and platforms to advance further, especially in improving the quality and interactivity of virtual learning environments.

2.7 Closing Discussion

The closing discussion was with Prof Colleen McLaughlin, Director of Educational Innovation: Faculty of Education, University of Cambridge, in conversation with Jane Mann, Managing Director of Cambridge Partnership for Education.

An interesting sentiment expressed in the break-out groups was how practice has moved ahead of policy and that we need to understand that teachers have been seeking out ways to deal with the circumstances and forming communities of practice. Secondly, practical supported is required with longer-term plans being made off the back of these practical successes. Thirdly, the sharing of resources and continued collaboration is essential – GOLA is an example of how people can come together.

Policy needs to evolve in the post-Covid world; for example, if professional development points were only applicable in face-to-face training then they need also to be available for online training. Critically, blended learning is not just about how to incorporate technology into teaching, but about how to teach students both inside and outside the classroom and accordingly how to spot the gaps and deal with students who have a variety of different experiences.

Professor McLaughlin will shortly be publishing a new book on the implementation of educational reform and her experience in working with schools in the UK and Kazakhstan has pointed to how the issues of equity and gaps in learning have always been there – the digital education experience is now forcing us to face up to them more. Now the education system is having to learn faster than at any time before. On the surface, we may think that we will manage this disruption through technology and access to digital devices. But in many places, that is currently impossible, meaning we must look at different concepts, such as what are the locations and environments in which children are learning and how have parents adapted to the greater demands of learning from home?

In the case of the University of Cambridge, a very old institution not renowned for fast change, they will not go back to the old ways of learning because they have discovered that some modes of learning are better suited to the digital environment. But not all digital learning works. Thus, we need to be more sophisticated in how we think about learning and devise online education policies. This requires proper evidence-based enquiry into the true impact over the last year. Many teachers have already expressed their lesser concern about catching up with subject content but rather catching up with the social and personal development of the students. Hence, the deeper approach is to take this opportunity to think through learning – where, how, and when it happens.

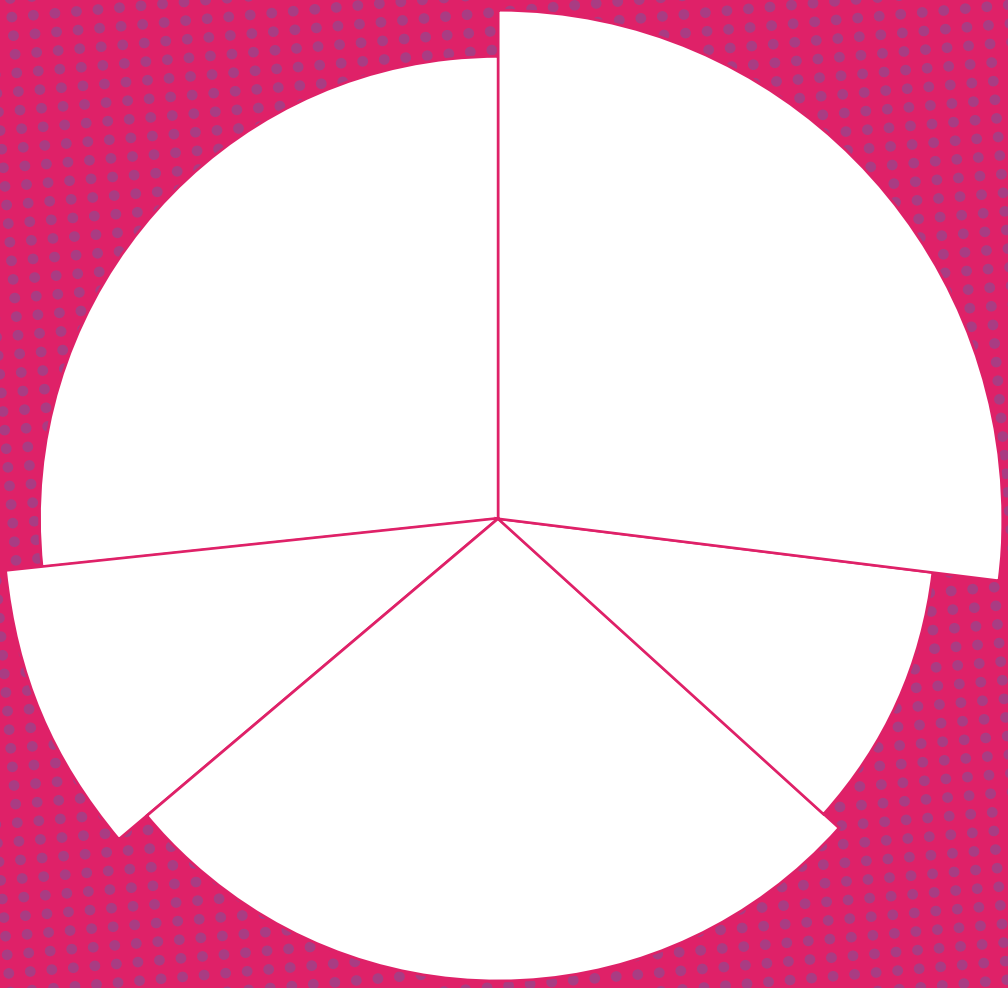
Regarding teachers developing new digital skills and how we support teachers in digital learning within a coherent system, Prof McLaughlin pointed to how this is already happening in many countries. Governments and schools are already thinking how to prepare teachers to teach online. The realisation is already there, along with the recognition that any systemic change must appreciate that the real knowledge lies with the teachers. Policy makers and institutions should work to develop this knowledge base of teachers further, which means supporting peer learning in schools. The challenge is achieving that at distance. CPD needs to change and be located on a set of assumptions that the school context matters and that teachers are not just ignorant recipients of policy. It works when teachers are engaged with policy changes right from the beginning.

For policy makers, Prof McLaughlin promoted the idea of embracing the disruption caused by the Covid pandemic – and embrace the lessons learnt. This is because the experience over the last 12 months has shown up both strengths and weaknesses and highlighted gaps in existing practices. For example, in a country like Finland we see a system designed in a manner that has in-built autonomy and flexibility for teachers, whereas in countries such as the UK or Australia we see a system based much more on compliance than creativity. A system based just purely on rules, not stepping out of line, and attending to inspection criteria, that is less adaptable to problem-solving. Models of teacher professional development really matter. They must be gauged over the length of a career and so the big message is not to short-circuit teachers by leaving them out of the CPD policy equation.

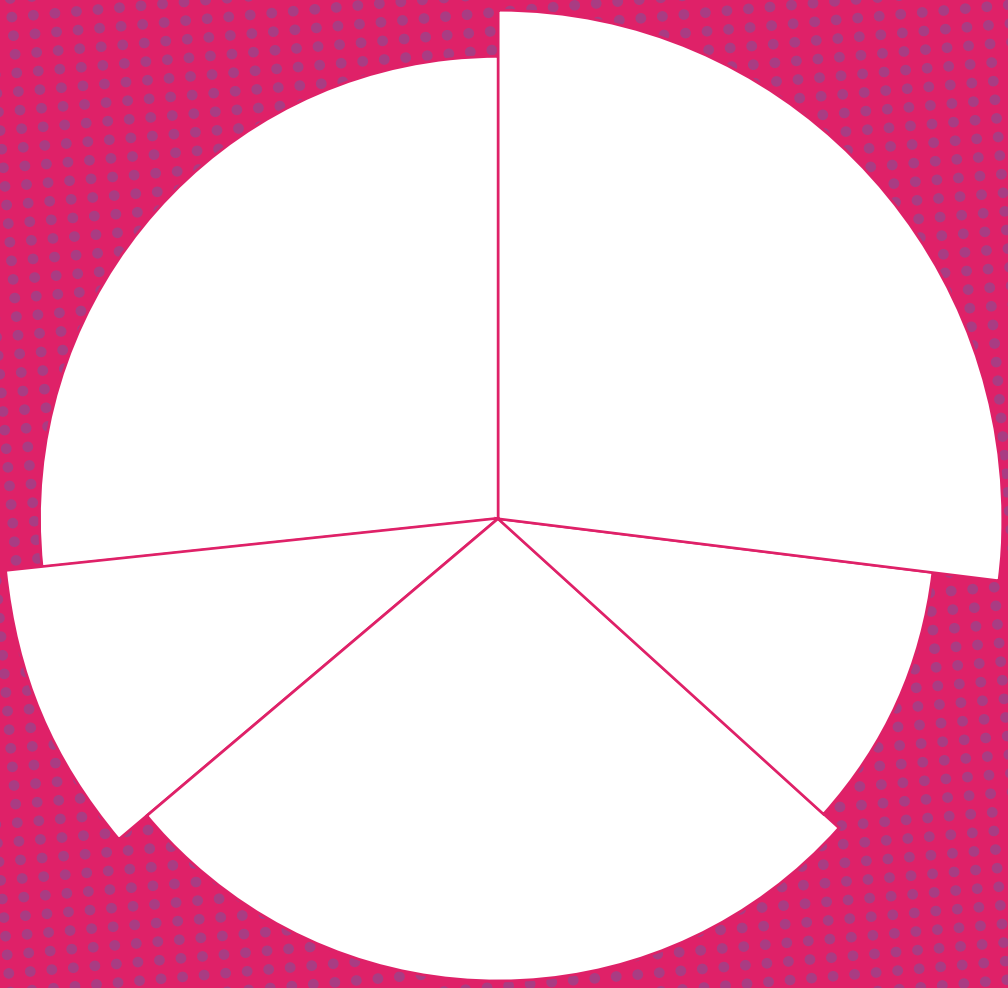
Jane Mann's final comments touched on the irony of Covid, in how we feel seemingly more connected than ever, and people's flexibility has demonstrated amazing resilience – as we have addressed previously in this report (§ 2.2). One concern going forward is around the elasticity of human nature and that when things appear to be returning to normal, that we will all snap back to what we did before. Change is difficult, sustaining change over time is even harder. That said, there is a real desire amongst everyone in education to take the experiences of the least year and move forward with genuine reform, adaptation, and continuing improvement. Teacher training and continuous professional development should be at the forefront of such an evolution.

- End -

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



APPENDICES



APPENDIX A

მასწავლებელთა პროფესიული განვითარების ეროვნული ცენტრი

საქართველოს განათლების, მეცნიერების, კულტურისა და სპორტის სამინისტრო

Evidence Based Teachers' Profesional Development

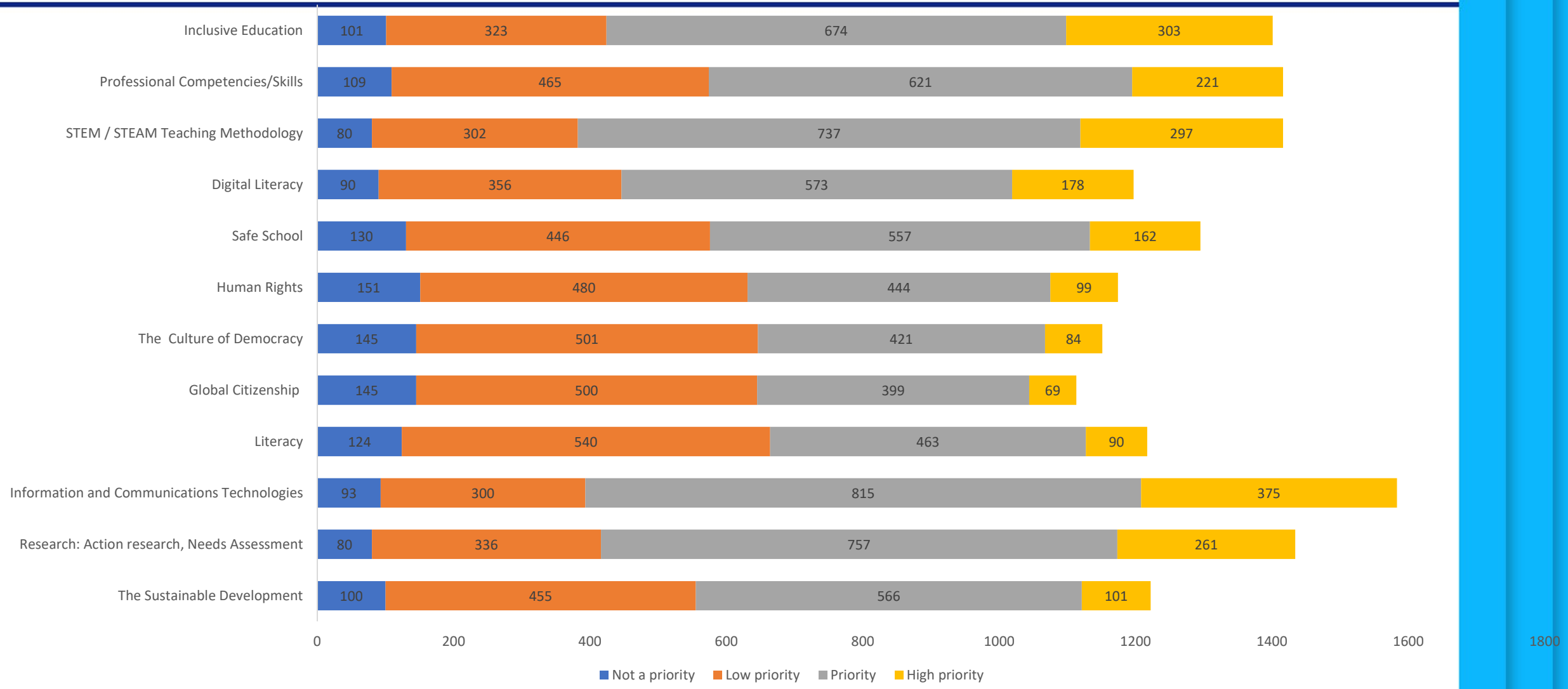
Dr. Berika Shukakidze

Tbilisi, 2021

1783 Public school administrators completed the questionnares

Method – Online Survey

Teacher professional development needs assessment

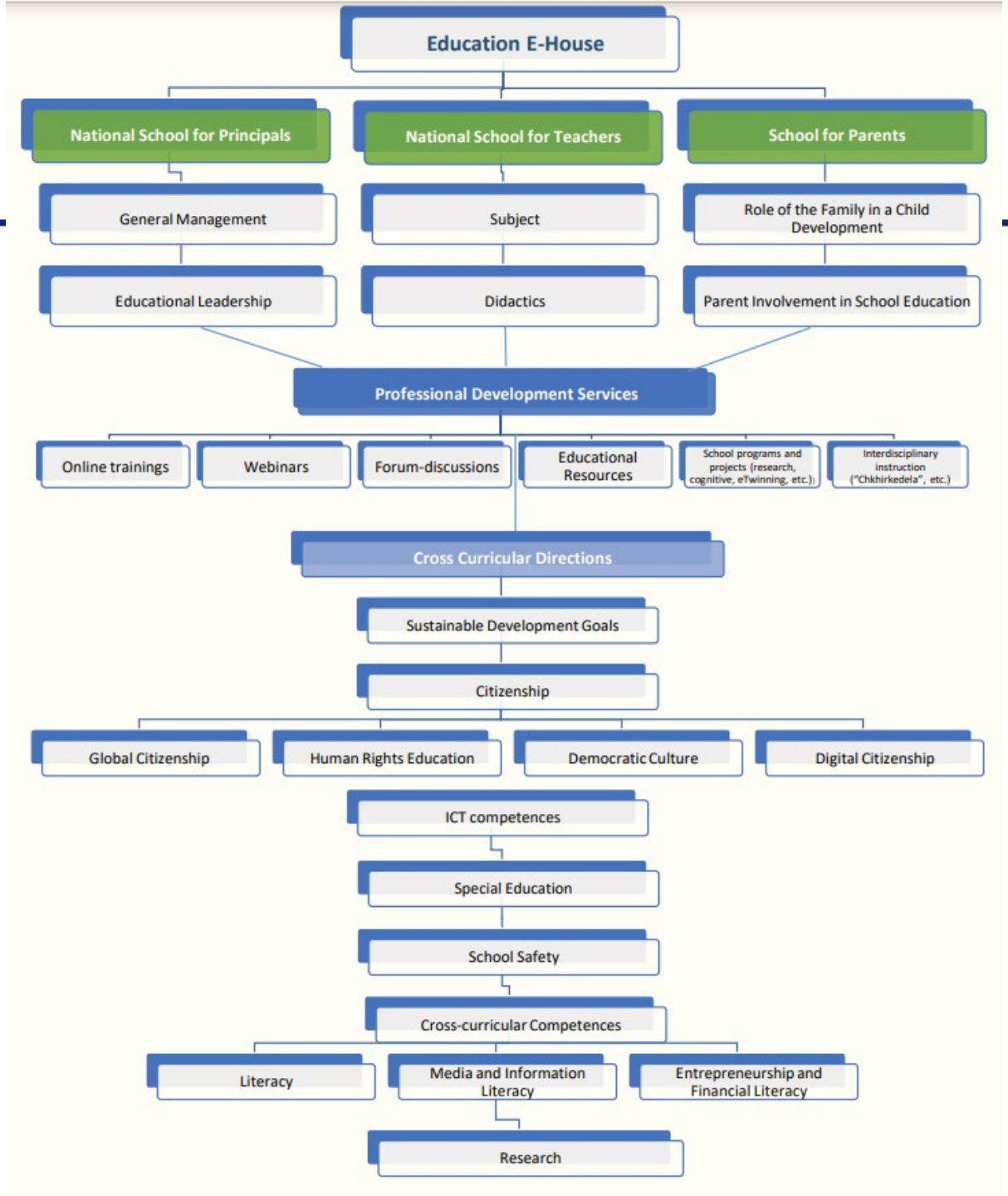


Elementary stage– subject competencies	164	457	530	153
Elementary stage- subject teaching methods	85	469	672	167
Natural Sciences(V-VI grades) –subject comnetencies	197	428	407	82
Natural Science (V-VI grades) – teaching methods	101	490	536	108
Georgian language and literature (V-XII grades) – subject competencies	236	439	383	78
Georgia language and literature ((V-XII grades) – teaching methods	116	516	540	114
Mathematics (V-XIIgrades) – subject competencies	193	402	456	106
Mathematics(V-XII grades) – teaching methods	93	452	625	136
History – subject competencies	236	406	386	85
History – teaching methods	108	461	575	123
Geography – subject competencies	223	390	395	76
Geography – teaching methods	112	465	572	107
Civic Education- subject competencies	185	408	449	94
Civic Education- teaching methods	99	450	580	135
Me and Society- subject competencies	138	398	497	121
Me and Society- teaching methods	87	428	614	147
Arts- subject competencies	171	362	493	126
Arts – teaching methods	90	397	637	162
Music – subject competencies	163	362	483	123
Music – teaching methods	74	389	645	167
Sports – subject competencies	126	307	560	206
Sports – teaching methods	67	343	662	244
Biology- subject competencies	231	376	397	82
Biology – teaching methods	130	436	569	116
Physics – subject competencies	179	350	465	147
Physics- teaching methods	103	381	602	179
Chemistry- subject competencies	207	369	422	113
Chemistry – teaching methods	98	425	572	147
Foreign languages (English, Russian, German, Franch)- subject competencies	207	399	460	107
Foreign languages (English, Russian, German, Franch)- teaching methods	110	440	636	141
ICT- subject Competencies	142	339	512	224
ICT – teaching methods	86	359	614	257

Teachers Professional Development Algorithm

1. Status based allocation:
   - ✓ Head teacher - 20 hrs;
   - ✓ Senior teacher - 12 hrs;
   - ✓ Mentor teacher - 8 hrs.

2. Priorities:

		hrs	hrs	hrs	hrs	hrs
1	Special education	4	4	4	4	4
2	ICT	4	4	4	4	
3	Research	4	4	4		
4	Didactics	4	4	4	4	4
5	Subject	4	4	4	4	

საქართველოს განათლების, მეცნიერების, კულტურისა და სპორტის სამინისტრო