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resilience and the strengthening of learning systems**

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Learning for global health in cities - Community resilience and the strengthening of learning systems¹

Michael Osborne², Yulia Nesterova³ and Ramjee Bhandari⁴,

Abstract

This paper investigates what the COVID-19 pandemic has revealed about the resilience of cities' communities and learning systems. In terms of community resilience, it explores issues of multi-sectoral planning as well as bottom-up citizen and NGO/CSO led practices and top-down policies and practice from national governments and regional/municipal administrations. Regarding learning systems, this account focuses on the roles of local government, formal (schools, colleges, universities) and non-formal institutions of learning, including IGOs and NGOs/CSOs within the youth and adult education sectors as well as the learning in the workplace and initiatives coming from businesses and foundations. It considers the ways in which these actors have worked both independently, and together in networks of to ensure continued provision of pre-existing formal and non-formal learning during the crisis. It also considers innovations, many collaborative between stakeholders, that have emerged during the pandemic, particularly with regard to the use of new technology, technology transfer and informal learning directed towards awareness raising and public health education. The paper is illustrated through case studies with a particular focus on municipalities that have declared themselves learning cities. A series of challenges for all actors and recommendations are made.

1. Introduction

The levels of preparedness for the challenges created by the health, social, and economic crises caused by the COVID-19 pandemic has varied significantly across cities and countries. Along with new challenges, the pandemic has been compounding existing risks by exacerbating deep-rooted issues of inequality, injustice and unsustainability in the epicentres of the outbreaks – cities. The disproportionately higher impact of COVID-19 on cities is not a surprise as they provide an environment conducive to a rapid spread of a disease: density of the population, crowded living conditions for most residents, jobs that have more exposure

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to others, and transport and social connectivity. The repercussions of the pandemic have had particularly adverse impacts on the most disadvantaged populations – those who live in densely populated neighbourhoods and/or informal settlements, have precarious employment, little if any financial security, and an already challenged access to education, healthcare, and other services (UNESCO, 2020a). The inequalities have manifested in the forms of unequal morbidity, mortality, and other socio-economic consequences (Bambra et al., 2021) and intensified an already booming learning crisis (Lambert et al., 2020).

The unequal impacts of the pandemic on populations were not inevitable as vulnerabilities and harms are fuelled by the divide in access and quality of urban services (Du et al., 2020) and the political choices made prior and during the pandemic. These factors determined the level and quality of cities' preparedness and **resilience**, namely, how well cities addressed emergency needs while 'simultaneously addressing the root causes of vulnerabilities, shocks and stressors' that hinder sustainable development (FAO, 2019).

For disadvantaged groups, delivery of services that were already poor, deteriorated even further as national, regional and/or urban systems of services struggled to provide healthcare, education, and a range of other social services to all. In formal education, exclusion *inter alia* may be experienced by virtue of socio-economic status, gender, race and ethnicity, Indigenous status, age, migrant, asylum seeker, and refugee status, disability, remoteness of geographical location, LGBTQI+ identity, and being incarcerated. It is also recognised in the intersectionality literature (Tefera, Powers and Fischman, 2018) that many individuals experience multiple forms of disadvantage. In the case of the COVID-19 pandemic, the educational inequity experienced by such groups has been exacerbated, because of the strong association with health inequalities (see Association of Schools of Public Health in the European Region (ASPHER, 2020)). Three examples are illustrative. First, older adults have much greater health vulnerabilities (Rogers, 1997), and at the same time are less likely to have access to learning opportunities (McBride, 2006) or be digitally and health literate (Manafa & Wong, 2012; Tsai et al., 2015). Second, disabled learners experience multiple forms of disadvantage and exclusion (Hernández-Saca et al., 2018, p. 287). Third, living in low and lower to middle income (LMIC) countries has decreased the chance of being educationally supported during the pandemic with some 40% of these economies providing no support at all (UNESCO 2020b).

There have been particular challenges for **learning systems**, those complex networks of formal and non-formal education, which have varying levels of organisation from place to place. The closing of formal and non-formal educational learning spaces, including cultural institutions, has generated major impediments in terms of access to learning, which has been experienced differentially, depending on individuals' home and neighbourhood environment, their personal characteristics, available access to and quality of technology (including adaptive technology) and broadband connectivity, and access to electricity. As a result of prolonged closures of educational institutions, there is an expectancy of substantial **learning loss**, putting many educational outcomes at risk and threatening to erase decades of progress and extend beyond our generation (United Nations (UN), 2020a).

Furthermore, this loss is likely to extend beyond formal education. For example, the OECD (2021) estimates that COVID-19 induced shutdowns decreased workers' participation in non-formal learning (workshops, employer-provided training) by an average of 18%, and in informal learning (learning from others, learning by doing, learning new things at work) by 25%, with men losing nearly 50% more learning opportunities than women. Low-skilled

workers with greatest need for education and training and who rely on informal learning were most affected by the shutdowns compared to high-skilled workers with stable, well-paid jobs who have regular opportunities for learning (Boeren, Roumell, and Roessger, 2020; OECD, 2021). Researchers in Canada estimate the 30% increase in the socio-economic skills gap while the World Bank predicts a reduction in average learning levels for all, a widening of the distribution of learning achievement, or a significant increase of students with very low level of achievement, suggesting that 25% more students may fall below a baseline level of proficiency they need to participate in society and future learning (UN, 2020a).

Much emphasis on combating learning loss has been put on developing schemes to enhance digital access for young people, but without, as Williamson, Eynon and Potter (2020, p. 110) argue, due regard for three key issues: an analysis of what constitutes adequate access; the digital skills support needed by young people; and the long-term sustainability of initiatives. Furthermore, unequal digital access for all age groups, and lack of digital and media literacy among disadvantaged residents in our cities has not only already led to differential access to learning opportunity, but also to an avalanche of misinformation perceived as fact and truth. This has challenged COVID-19 prevention efforts (Dupoux et al., 2020) and has showcased the critical importance of closing the digital divide and the role of adult and lifelong learning. In this regard, the work of Lopes and McKay (2020) in South Africa highlights the role of health-related adult education interventions.

School closures, interrupted learning, insecurities and fears, and other pressures have affected children, youth, and adults emotionally, cognitively, and behaviourally. As a result, in some countries mental health and wellbeing have emerged as a critical consideration in COVID-19 responses, while in many others, they have received little to no attention. Yet, as we now know, the pandemic has had an adverse impact on the mental health of all, including frontline health workers (Fusar-Poli et al., 2020). A systematic review of studies from multiple countries has reported that more than four in five people in general were facing COVID-19 related stress (Xiong, et al., 2020). The main reasons for the emergence of these issues were changes in individuals' social environments, with factors such as social isolation, economic losses, loss of coping mechanisms and reduced access to mental health services to the fore (Marshall et al., 2020). Among other consequences of compromised mental health and wellbeing has been a diminution in learning outcomes.

Crises are often seen as an opportunity, an impetus for positive change (Harrow, 2009) because to cope and recover, communities and institutions utilise "new ways to learn, act, relate and think" (Smythe, Wilbur, & Hunter, 2021, p. 11). As the pandemic has forced us to rethink and reinvent the way we live, innovative and creative thinking and praxis have been further emphasised as a pathway of transformation towards the cities of tomorrow – cities that are more just, equitable, and resilient for all. A central focus of the transformation may be the building of more resilient cities that are prepared for similar and other types of shocks and stresses in the future (OECD, 2020a), which includes not only coping with pandemics, but other global challenges, notably the climate crisis, and other natural and human-created hazards and emergencies. Formal and non-formal education, and learning in its widest sense arguably should be at the forefront of such transformation as a bedrock to mitigate adversities, protect vulnerable people, and strengthen resilience of individuals, communities, and institutions (World Bank, 2016). Adult and youth education, especially non-formal educational activities, has a particularly important role as its diverse range, demand

orientation, and flexibility allow responses to the needs of learners in a context-specific way (DVV International, 2021).

Of course, the COVID-19 pandemic is not the only crisis that cities have had to address in recent decades. As we have suggested above, natural and human-made disasters (e.g., climate change, food security, protracted conflicts and forced migration, and the world financial crisis) have challenged cities to develop inter-linked physical, economic, social, health, environmental and cultural infrastructures to make themselves more resilient. However, the COVID-19 pandemic has acted as a particular wake-up call by bringing to the surface deep-rooted systemic structural issues and inequities. As the Global Resilience Partnership (2018) reminds us, we are now facing a new reality with more frequent shocks and longer-lasting stresses. We simply cannot continue to live as we did in the world as it was before the pandemic. With this level of unpredictability, we now have an opportunity to maximise the momentum for change towards resilient cities where disparities are addressed, and all people prosper in the face of crises and threats. It is argued that investing in resilience-building at this point will 'prevent and curtail economic, environmental and human losses in the event of crisis' and thus reduce human suffering and drive sustainable development (UN, 2020b).

In this paper, we discuss the role and initiatives of a wide range of actors and stakeholders that in time of great need and great challenges, supported their fellow residents, including the most vulnerable, and thus helped build resilience of their local communities. Many of these initiatives are local to their places; however, they perhaps offer a chance for mutual learning and resilience-building from diverse contexts as these lessons can be adapted or scaled up elsewhere (Raza et al., 2021) to help achieve the Sustainable Development Goals (SDGs). Some interventions, for instance, those involving inter-governmental organisations and private foundations, are massive in scale. Other initiatives, often led by NGOs are small in scope and outreach, but it is important to remember that we are at a critical moment where we can have a sustainable future only when action is collective, systemic, and inter-sectoral. If we learn anything from this crisis, it should be the need for system-level collective action and progress to support everyone and leave no one behind (Hassan et al., 2021), the values that underpin the *2030 Agenda for Sustainable Development*. All SDGs are important, but of vital interest in our discussion is the interplay between SDG3 (Health), SDG4 (Education) and SDG11 (Cities).

In the context of learning system responses, those from cities who have proclaimed themselves to be or are designated as **learning cities** are of particular resonance. The learning city concept is underpinned not only by the notion of co-operation that crosses formal and non-formal education, but also that permeates all aspects of service provision and stakeholders (Longworth and Osborne, 2010). UNESCO's (2015, p. 9) framing within the Global Network of Learning Cities, of a learning city being one 'which effectively mobilizes its resources in every sector to promote inclusive learning from basic to higher education' is also apposite. Furthermore, as in framing such as that of the EcCoWell model (Kearns and Reghenzani-Kearns, 2019), there is a need of the recognition of the interconnectedness of learning with environmental, economic, community, cultural, and health and well-being factors.

2. Conceptual framework

The United Nations (2020b) defines **resilience** as

the ability of individuals, households, communities, cities, institutions, systems and societies to prevent, resist, absorb, respond and recover positively, efficiently and effectively when faced with a wide range of risks, while maintaining an acceptable level of functioning without compromising long-term prospects for sustainable development, peace and security, human rights and well-being for all.

Resilience and the *2030 Agenda for Sustainable Development* are closely interconnected. On one hand, resilience is a prerequisite to achieving the *2030 Agenda for Sustainable Development*: in this unprecedented time of crises and unpredictability, strengthening resilience of communities will help to achieve the SDGs and protect development gains (Bahadur et al., 2015). On the other hand, working towards the *2030 Agenda* contributes to building resilient communities (UN Office for Disaster Risk Reduction, 2015) as SDGs set communities on the path to ensure healthy lives of all (SDG3) and access to quality and inclusive education and learning (SDG4) for all and significantly reduce gender (SDG5) and other inequalities (SDG10) to ensure full and meaningful participation of women and other marginalised groups (SDG5). Resilience is also ‘a catalyst for sustainable urban development’ (UN Habitat, n/d a) as it supports building of cities that are safe and inclusive for all (SDG11).

Although resilience implicitly cuts across all the 17 SDGs, it is featured prominently in several Targets relevant to this paper, in particular:

- Target 1.5. ‘build resilience of the poor and those in vulnerable situations, and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters’
- Target 9.1. ‘develop, quality reliable, sustainable and resilient infrastructure’
- Target 11.5. ‘significantly reduce the number of deaths and the number of people affected and decrease by [x] per cent the economic losses relative to gross domestic product cause by disasters ...’
- Target 11.b. ‘substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resources efficiency, mitigation and adaptation to climate change, resilience to disasters, develop and implement, [...] holistic disaster risk management at all levels.’

A **resilient community** is defined by the United Nations (n/d) as a city or neighbourhood that is capable of ‘reduce[ing] its vulnerability to dramatic change or extreme events and respond[ing] creatively to economic, social and environmental change in order to increase its long-term sustainability.’

UN Habitat (n/d b) views **urban resilience** as ‘the measurable ability of any urban system, with its inhabitants, to maintain continuity through all shocks and stresses, while positively adapting and transforming toward sustainability.’ A **resilient city** then ‘assesses, plans and acts to prepare for and respond to all hazards – sudden and slow-onset, expected and unexpected’ (UN Habitat, n/d b).

Resilient cities, for the Rockefeller Foundation (2015), have four dimensions and seven qualities that allow them to mitigate and withstand crises, bounce back, and re-build sustainably. The dimensions are:

1. Health and wellbeing of everyone living and working in the city (e.g., resources to meet basic physiological needs, support for livelihoods and employment, public health services),
2. Economy and society: the social and financial systems that enable urban dwellers to live peacefully and act collectively (e.g., promoting cohesive and engaged communities, ensuring social stability, security and justice, fostering economic prosperity),
3. Infrastructure and environment: effective leadership, empowered stakeholders, and integrated planning (e.g., providing protective natural and man-made assets, ensuring continuity of critical services, providing reliable communication and mobility),
4. Leadership and strategy: the way in which man-made and natural infrastructure provide critical services and protects urban population (e.g., promoting leadership and effective management, empowering a broad range of stakeholders, fostering long-term and integrated planning).

The qualities of resilient cities the Rockefeller Foundation (2015) identifies include: being *reflective* (using past experiences to inform future decisions and modify standards and behaviours); *resourceful* (recognising alternative ways to use resources to meet the needs and achieve goals), *robust* (design is well-conceived and managed and includes provisions to ensure failure is predictable and safe), *flexible* (ability to adopt alternative strategies as a response to crises), *inclusive* (broad consultation, shared ownership, joint vision), *integrated* (bringing together systems and institutions to catalyse benefits), and *redundancy* (spare capacity and diversity to easily accommodate disruption).

In addition to geographic communities (cities and neighbourhoods), there are other types of communities, including communities of 'interest' (e.g., faith groups, business groups, online communities), communities of 'circumstance' (e.g., groups of people affected by the same crisis such as COVID-19), and communities of 'supporters' (e.g., groups within organisations that provide emergency response). They can support resilience of their own communities and complement building of the resilience of geographic communities by harnessing their resources, networks, and expertise. In particular, the UK Cabinet Office (2011) outlines six actions of resilient communities:

1. using and adapting existing skills and resources to prepare for and deal with shocks and stresses,
2. awareness of the risks that may affect them which makes them to take action to prepare for their consequences,
3. trusted champion who communicates with, motivates, and encourages the wider community to get and stay involved,
4. partnership with the emergency services, local authority and other relevant organisations to complement each other's work,
5. community members take steps to make their homes and families more resilient by deploying their skills, experience, and resources to best effect,
6. community members are actively involved in influencing and making decisions affecting them, in the interest of the community.

While resilience recognises vulnerable communities, including children and youth, as major actors in their own future, it necessitates a **holistic and multi-sectoral approach** for diverse actors and stakeholders to work together and individually to address financial, political, disaster, conflict, or climate related threats to development (Sturgess & Sparrey, 2016). The Food and Agriculture Organisation of the UN (FAO, 2019) recommends establishing a strong, inclusive, and participatory coalition of actors from the start to work towards common objectives and through a shared, synchronised, and coordinated approach. The United Nations (2020b, p. 8) further identifies four elements to build resilience to meet the SDGs:

- (i) *Understanding of the context and the multiple and interconnected dimensions of risks*: risks that can disrupt social, economic and environmental systems must be understood and analysed within specific political, socio-economic, and environmental contexts,
- (ii) *Recognition of how systems are interconnected*: understanding that many adverse events are occurring across global, regional, national, subnational and local scales, with cascading effects among interconnected social, governance, economic, ecological and physical systems,
- (iii) *Inclusion of multiple stakeholders in a gender- responsive manner*: involving all relevant stakeholders guarantees that a broad range of perspectives on risk informs the process and ensures that the needs, including those of the most vulnerable, are addressed,
- (iv) *Presence of capacities for resilience*: systems, institutions and people are considered 'resilient' when they have absorptive, adaptive, anticipative, preventive and transformative capacities and resources to cope with, withstand and bounce back from shocks.

On the points of inclusion (iii) and capacity-building of actors (iv) above, we can complement these elements by the steps outlined by the World Bank (2013) that require communities to:

1. identify and mobilise assets already available locally (e.g., human capital, community services)
2. foster individual and community strengths and opportunities (e.g., resourcefulness, perseverance, problem-solving, motivation, optimism)
3. strengthen institutional supports (e.g., systems, policies, programmes, resources), and
4. build relations between individuals, communities, and institutions.

For resilience-building in pursuit of the SDGs, communities are recommended to follow the principles outlined by the Global Resilience Partnership (2018), including:

1. Embrace complexity: work to identify the root causes of complex development challenges, and how these can be addressed within political, economic, ecological, and social systems.
2. Recognise constant change: risks and stresses are becoming increasingly unpredictable, uncertain and unavoidable. Systems need the capacity to navigate dynamic and uncertain futures.
3. Enable inclusive decision-making: putting people and communities, especially women and marginalised groups, at the centre of decisions and empowering them to help develop equitable and sustainable solutions.

4. Enhance ecosystems integrity: approaches to development must ensure a good life for all while maintaining the integrity of the Earth's ecosystems.
5. Promote flexibility and learning: a rigid or fixed solution will not build resilience for change; approaches need to be adaptive and responsive, constantly learning from success and failure.
6. Leverage innovation and opportunity: developing new solutions and innovations that address the complexity of development challenges will be essential for transforming to sustainable and just development.

Additionally, learning systems are expected to support building of resilient cities. Shah (2015) outlines how learning systems can support resilience by

1. nurturing self-sustaining communities and societies capable
2. of redressing weaknesses and leveraging upon everyone's strengths,
3. fostering individuals' agency and capabilities to be adaptive, responsive, flexible, to function in a state of flux, and to address risks,
4. providing support and protection to individuals and communities in the time of crisis so that they can act in a resilient manner and leverage existing networks and expertise for mutual aid,
5. supporting the transformation of the system by eradicating structural injustices, inequalities, unbalanced power relations, as well as marginalisation and exclusion of vulnerable groups.

For learning systems to be able to support the resilience of communities, cities, and countries in the time of crises, they need to be strengthened. **Strengthening learning and education systems** involves "enabling these systems to achieve their goals in an effective, integrated, and sustainable way, while factoring in close interaction with their cultural, social, and economic environment" (UNESCO IIEP, 2012, p. 11). In short, education and learning systems need to be able to respond to and be supported by their socio-cultural and economic environment. According to IIEP, strengthening of systems thus includes

1. ensuring effective interaction between the education sector, other sectors, and the different groups⁵ of society (e.g., intersectoral and participatory planning) to identify and respond to educational-development needs,
2. achieving educational-development goals in a holistic manner, considering their inter-connections and linkages among the various factors and arrangements required to attain the goals of education systems in a consistent manner across different sub-sectors and levels of education,
3. leading actors from inside (managers, teachers) and outside (parents, non-governmental organisations) the education system towards coherent, integrated action to attain these goals, through incentives, procedures, etc., and factoring a long-term perspective and sustainability concerns into the formulation of education policies and strategies.

Whilst the notion of resilience has gained many followers in the policy community, including in the international development community in relation to coping with major disaster, it must

⁵ Participatory planning and consultations are essential to respond to the needs of disadvantaged and vulnerable groups, such as refugees and internally displaced people, people with disabilities, LGBTQAI+, migrants, ethnic/religious/linguistic minorities, and others.

be acknowledged that it is a contested idea. Mikulewicz (2019, p. 267) amongst others, in the context of climate change, has posed four critiques of the concept:

- (1) its inability to sufficiently recognise the large-scale political, economic, and social forces affecting and effecting change,
- (2) its oversight of the analysed systems' internal dynamics,
- (3) the depoliticised, techno-managerial nature of resilience-centred solutions, and
- (4) the theoretical vagueness of resilience as applied by development actors.

Shah, Paulson, and Coach (2020) discussed the use of the concept of resilience in the context of education in emergencies communities, drawing on their analysis of key documents in the field. Their critique of the concept is primarily concerned with

- (1) a shift from understanding and seeking to change the root causes of emergencies (and conflict) towards the focus on risk mitigation,
- (2) transferring responsibility to be resilient – to sustain themselves in the face of shocks and crises – on to students, teachers, and families at the neglect of the role structures, governments, and institutions should play in strengthening and supporting city and community resilience,
- (3) moving away from viewing education as a fundamental human right and an opportunity to develop a holistic range of capabilities for humans to flourish to a set of psychological and cognitive interventions to help people 'bounce back better',
- (4) the prevailing deficit discourse that sees the need to prescribe to local communities what resilience means as an attempt to fix them instead of empowering them and building on their agency to construct the meaning of resilience and identify the steps they should take to achieve and sustain it.

Regarding education in cities, especially at the time of the pandemic and post-pandemic recovery, these critiques showcase the importance of

- a. contextualising resilience-building action, including by collaboratively developing a contextually relevant and easily operationalised definition of resilience with a shared vision and objective for all actors and drawing on local capacities and resources to enact it,
- b. while addressing the humanitarian crisis created by the pandemic in education and beyond, simultaneously working to address the root causes that lead to the lack of resilience. For example, instead of simply providing short-term solutions to the closure of education institutions (e.g., distance learning), we need to rethink and reassess education and learning with a particular focus on injustices and inequities, the value and objective of learning and education, and how it supports sustainable development and sustainable living.

3. Policies and practices in cities

Management of and the recovery from the crisis caused by the pandemic has required a concerted and simultaneous effort on the part of local governments, services, institutions, organisations, and residents. While in many cities local systems were already flexible and adaptive and fostered necessary collaborations and coordination, in others, it necessitated a

rapid adaptation to new ways of operation (UNESCO, 2020a). Across the world, new formal structures have been created in response to the pandemic along with initiatives that emerged from city residents. As risks have become increasingly interconnected, ‘with the impacts of shock and disasters cascading across systems and sectors’ (UN, 2020b, p. 7), resilience-building can only be achieved through a comprehensive, joined-up, and multi-sectoral planning and action. Hence, we can observe at city level many planned system-level *top-down* actions, some in response to regional and national imperatives. In parallel in cities, we can see other *bottom-up* NGO, neighbourhood-level, and citizen-led initiatives.

The magnitude of challenges created by the pandemic has necessitated non-state actors, including ordinary residents, to share the responsibility for the response and recovery, working on their own but also in co-operation with each other. As this section shows, a range of urban actors and stakeholders have designed and implemented activities to address multiple dimensions of the crisis and to support diverse groups of people on their own and in collaboration with others.

For learning provision, we focus on: *providers* of services, including local governments, universities, schools, , the NGO sector, private sector and consider how these organisations have worked as system-wide networks; *types of provision* such as face-to-face, online, and blended; *purposes of provision*, including raising awareness, restructuring existing provision, emotional and mental health support, and capacity development; *and target groups*

By showcasing and analysing a range of examples from diverse contexts, we seek to understand what categories have shown to be more effective in making cities and learning cities more resilient. We then consider the extent to which these responses are embedded within learning systems overall, and the implications for learning system development.

3.1. Role of city, regional, and local governments

Whilst there have been many nationally directed responses as for example in the case of the development of digital infrastructures for schools in **India** (Case Study 8), interactive radio for schools in **Rwanda** (Case Study 11) and national directives on educational practices (see for example Ecuador and Finland⁶ amongst many), cities have played a central role in responding to the crises caused by the pandemic. As the closest level of government to the people and as essential providers of services, they are better positioned to reach, engage, and cooperate with communities as part of the solution (UNESCO, 2020a; WHO Europe, n/d). Some cities provided multi-dimensional responses, implementing national measures for prevention, adaptation, and recovery and opening spaces for bottom-up, intersectoral, and innovative approaches to recover from the health crisis, and social and economic shocks that accompanied it (OECD, 2020a). In addition, some have had to assume a new role: as the pandemic changed people’s daily routines so dramatically, local governments have had to support residents in strengthening their sense of belonging to a common humanity and sharing empathy, respect, and solidarity with fellow residents (UNESCO UIL, 2020). Such responses in some contexts have been place-blind and uniform (OECD, 2020a), whilst in

⁶ <https://educacion.gob.ec/la-ministra-de-educacion-dio-detalles-sobre-el-retorno-voluntario-a-clases/> and <https://minedu.fi/en/the-impact-of-coronavirus-on-education-and-culture>. Finland is an interesting example of a country that has always prepared itself for crisis, and had stocked personal protection materials, devised crisis management models, held exercises, and trained people for crisis management. However, the pandemic has over time led to a move from centralised pre-conceived planning to a more flexible and responsive model devolved to cities (personal communication with Jari Stenvall, University of Tampere, 28 June 2021)

others they have been tailor-made to support local realities and address local needs. The Case Study 7 of the city of **Lucca** in Italy is illustrative of a focus on the well-being of parents and young children (between 0 and 6 years), and of a concerted effort at regional and municipal level. The work of the learning city of **Bogotá** in Colombia (Case Study 3) is illustrative of a comprehensive range of forms of response, and includes using art education to address mental health issues of citizens, community health promoters to facilitate citizens to learn healthy behaviours, the training of health professionals in communicating with patients and supporting home schooling. At a different scale, the work of the learning city of Mantes-la-Jolie in France⁷, co-leader of the cluster “inclusion and equity” within the GNLC, also demonstrates a comprehensive response during the pandemic that includes a number of new municipal services, notably the organisation of tutoring for families and students by young people, the supply of laptops to school pupils and the creation of a virtual platform for those aged over 65.

Case Study 8 of the learning city of **Medellín** in Colombia is also illustrative of system-level health-oriented learning intervention that has been facilitated in a planned way. In this case we see an example of a collaboration of the public sector (the *Ministerio de Ciencia y Tecnología de Colombia* and the *Secretaría de Educación de Medellín*) with universities to design and mass produce personal protective equipment (PPE), specifically tailored for school-age children (5 - 10 years old). In so doing this technology transfer programme not only has provided protection for teachers and children, but has allowed continuity of learning.

Many cities also recognise that the health challenges that they face require a global collaborative response. For example, in the city of Taipei in Taiwan as well as responding to the imperatives of the national government through the *Central Epidemic Command Center (CECC)*, a division of the *National Health Command Center (NHCC)*, it has overtly recognised, as befits a longstanding learning city, the importance of sharing its experiences with other cities in the world. As part of what it has described its ‘second line of defense’⁸, it has promoted both teleworking and a remote learning infrastructure so that organizations are prepared to transition to virtual mode.

Cities of course are central to providing system level educational responses given their control over publicly-funded schooling and in some cases other sectors of formal education, community learning and other social service and infrastructure sectors. As is evident from our introduction to this section, they do much more than this. In what follows we illustrate the wider responses of cities before returning to the role of specific forms of institution.

Given their multiple responsibilities cities have the capacity to target place-based interventions where they are most needed as illustrated in the **city of Berlin’s** work with refugees (Case Study 1) and the **city of Brasilia’s** with the hearing impaired (Case Study 2). A number of cities in Australia, particular in the metropolitan area of Melbourne, within which many municipalities are learning cities, illustrate the importance of broad-ranging and inter-connected services in utilising non-formal means to delivery learning opportunity in response

⁷ For more detail see https://uil.unesco.org/system/files/mantes_la_jolie.pdf

⁸ See

https://english.gov.taipei/covid19/News_Content.aspx?n=10853F2DDA203018&sms=DFD7BFAE73CC0B5C&s=F4E0063334EC6C60

to the challenges of the pandemic. This includes the community connector hubs and community learning initiative in the **city of Melton** (Case Study 9) and its work with other parts of **Melbourne** in developing a learning festival (Case Study 10), which now has global reach. Other cities in the area have utilised libraries as the lead organisation for the interventions, drawing on a long-standing history of doing so in the context of learning city development (see Faris, 2004). Examples include the **city of Canning** (Case Study 14) in its employability work and city of Brimbank in its *Boomers to Zoomers* programme to enhance adults' digital skills (Case Study 13). The learning **city of Wolverhampton** in the UK as part of an overall system level planning has also put considerable focus on digital capacity building for adults (Case Study 12).

Culture, creativity, and green spaces are important in people's lives as they can support mental wellbeing. These spaces enrich life by supporting learning and personal development, offering entertainment and leisure, and bringing diverse groups together to strengthen social connection and cohesion (UNESCO, 2020a; 2020c). Access to such informal learning became crucial during the pandemic, and cultural assets within cities have been particularly valuable. As most citizens globally could no longer enjoy cultural and artistic activities outside due to social distancing measures, for many culture came to their homes.

Across the world, cities moved cultural programmes online to reach their residents and to make access to culture more inclusive. A UNESCO report (2020c) provides a range of such initiatives including virtual museums and exhibitions (Bulgaria, France, Italy, Lebanon, Republic of Korea), online libraries (Colombia, UK, USA), online music platforms and concerts (Italy, Mexico, Russia, Spain), (short) films (Bosnia and Herzegovina, Spain, UK) and writing competitions (New Zealand), online book-reading sessions by theatre artists (Republic of Korea), and online arts and crafts workshops (China, Mexico).

In Argentina, the city of Buenos Aires launched an online platform with open access to diverse artistic content in one place, ranging from theatres, museums, local artists, musicians, to cultural activities for adults and children such as learning programmes, virtual tours, challenges, podcasts, and many others. Within its initiative titled 'Literature and Arts as Helpmate and Therapist', the city of Slemani in Iraq reached out to artists, writers, and journalists in other UNESCO Creative Cities to compile and digitalise a collection of literary works entitled 'Caring for Each Other is a Human Right'. The use of virtual space benefited young people in particular, by offering them a platform, but also helping to connect with cities' inhabitants.

The UNESCO report (2020c) provides further examples. In some cities, cultural initiatives were organised in spaces where physical distancing could be ensured, including music, theatre, circus and dance performances in apartment blocks (Lithuania), images from films projected on buildings (Italy), street art in public spaces (Denmark, People's Republic of China), light installations to honour frontline workers (France), and book drive-through programmes (Republic of Korea). In Uruguay, literary work from local writers and publishers was included in baskets with food and other necessities for vulnerable communities and in Spain, collective awareness raising campaigns where residents would share videos of their experiences were organised. Across the world, libraries provided free access to e-collections of newspapers and books, virtual learning programmes for all ages, and learning materials about the pandemic and preventive healthcare (UNESCO UIL, 2020). In Wyndham, Australia, the city library offered free live tutoring for students, online educational games for children, family history support, online resume support programmes for jobseekers, online volunteering

programmes, and cultural events (ibid). In partnership with local governments, museums organised an educational response to the pandemic by means of online exhibitions as in Shanghai, China, where residents were encouraged to share their efforts to combat the pandemic and in Glasgow, UK, where there were provided lectures on civic engagement and ideas to boost confidence and solidarity (ibid).

On a negative note, however, the closing of most physical places also came at a cost. For example, for people who do not have a support system and/or who experience domestic violence, libraries had been a safe place. Closing of libraries as physical spaces precluded them from seeking refuge and support in a familiar environment.

3.2. Role of formal institutions

During lockdowns, schools, Technical and Vocational Education and Training (TVET) institutions, Higher Education Institutions, and Youth and Adult Education centres all had to be creative in maximising access to and benefit from remote, notably virtual, learning for all, but especially more disadvantaged students. The swift shift to new modes of teaching and learning raised many issues, including financial support of students with no or limited access to necessary technology, support of teachers with no or little experience in non-traditional teaching methods, and challenges of sustaining quality and understanding what assessment methods could work (Knobel, 2020). To succeed, educational institutions had to be flexible and creative. The example of **Shanghai Open University** and **East China Normal University** (see Case Study 20) in converting programmes into open learning form is one of many such schemes around the world, but is illustrative of an element of a comprehensive system level intervention at municipal level from an entity with a longstanding commitment to developing a learning city framework.

Many other examples of the embeddedness of the work of **universities** within learning city developments have been illustrated in presentations made during webinars organised by UIL during 2020. This included the work of Bahir Dar University in Ethiopia and the Pontificia Universidad Católica de Chile in enhancing public awareness of preventative measures and the training of health professionals⁹. A further example from the University of Duhok has involved developing guidelines for hospitals in dealing with the pandemic in maternity and paediatric wards¹⁰.

While the pandemic has disrupted the work of formal education institutions in many ways, it has shown the value they have in our societies in supporting and facilitating change and innovation (Dennis, 2021). Along with supporting their communities (e.g., students, academic and non-academic staff), conducting vital medical research, and providing evidence to inform policies, universities across the world have been contributing to national efforts against the pandemic. Knowledge exchange has been one of such ways as it helped communicate timely and accurate scientific information to the public. Universities have used varied methods including hotlines by medical and nursing students for health-related concerns, regular blogposts, podcasts, and other media in Brazil (Knobel, 2020), and evidence-based

⁹ See <https://uil.unesco.org/lifelong-learning/learning-cities/gnlc-webinars-unesco-learning-cities-response-covid-19>

¹⁰ Personal communication with Dr Azad Haleem, University of Duhok, 30 June 2021

information through videos and websites to support healthcare and community workers in the UK (Universities UK, 2020). Some of this work has been global in its coverage include that of the London School of Hygiene & Tropical Medicine with Health England in providing training for frontline health workers in Africa (see Case Study 21)

Much has also been accomplished by universities across Latin America as can be seen in the examples offered by Reisberg (2021). Mexico's Monterrey Institute of Technology, for example, established academic communities to bring together teachers to seek creative solutions to teaching science online and develop required software while the Pontificia Universidad Católica de Chile published a manual for online teaching in open access and launched a YouTube channel about virtual teaching best practices. In the UK, universities have trained and skilled up healthcare staff, retirees, and new recruits, set up support groups, created accessible interactive exercises and games and streamed wellbeing classes (e.g., yoga, fitness, dance, choir, nutrition) to help populations' mental and physical health. Staff and students have volunteered in different capacities to support communities, created videos on how to talk about COVID-19 in a factual way with children and youth to reduce their anxiety, offered practical guidance to parents and teachers to support children's learning, and devised exercises for different subjects that children could do at home (Universities UK, 2020). Case studies 22 and 23, from Ekaterinburg and Rostov in Russia are illustrative of ways in which universities have been supporting particular sectors of their community in these cases children with disabilities and the wider public with regard to mental illness.

It is likely that universities (and colleges and adult education centres) will continue to be key actors in post-COVID-19 recovery as people who lost their jobs and whose jobs have vanished will need to upskill, reskill, or seek new occupations (Boeren, Roumell, and Roessger, 2020), especially in key recovery sectors such as new technologies, green innovation, and health and social care (Cowan, 2021).

It should also be noted that **federations of universities and of students** have worked collaboratively in health-related activities. For example, under the banner of "supporting and empowering educators", the International Federation of Catholic Universities (IFCU)¹¹ has organised training modules targeting the teachers at Catholic universities from around the globe. It is currently creating a "Global health, health security and resilience" network, which benefits from and is in line with the work of the federation undertaken over the past two years, including actions conducted by its international working group on "Health issues". An illustration of student-led activity is the work of All-Africa Students' Union (AASU)¹². With the objective to "strengthen gender equality in and through education", AASU has been utilising its effective grassroots mobilisation capacity to sensitise and build solidarity in planning, designing and delivery of learning opportunities during the pandemic.

Similarly, **schools** have shown how valuable they are to the community as they develop a broad range of competencies and skills and provide a caretaking role to children and youth. Universally schools tend to be under the direct jurisdiction of city authorities; they are vital vehicles for driving lifelong learning and the bedrock for many learning city developments. Case study 4 of the learning city of Glasgow's roll out of laptops to all of its school-pupils is

¹¹ See <https://globaleducationcoalition.unesco.org/Members/Details/189>

¹² <https://globaleducationcoalition.unesco.org/Members/Details/141>

illustrative of a co-ordinated system level response. There are also around the world many example of schools working in multi-stakeholder partnerships to support children's learning in new ways, including collaborating with parents, community organisations, technology companies, businesses, and other relevant actors (Vegas and Winthrop, 2020) to mitigate the effect of the closure of buildings by creating alternatives to face-to-face delivery. Similarly, partnerships between schools and universities have a potential to support mental health, strengthen capacities, and support change. In Egypt, for example, school-university partnerships that focused on creating peer communities of learners have played a particularly important role in supporting teachers throughout the pandemic thus improving students' learning, support systems, and outcomes (Zaalouk et al., 2021).

Youth and adult learning centres have the potential become a critical part of cities' educational response to the crisis as their flexible learning modalities can more easily adapt to rapidly changing circumstances and requirements, reach underserved communities with relevant learning opportunities, and change people's behaviour and ways of thinking (UNESCO UIL, 2020).

The effect of COVID-19 on young people has been well documented, for example in surveys of the European Commission/Council of Europe (2020) and OECD (2020b), and show that those in the age-group 15-24 have experienced particular vulnerability with regard to their access to educational and employment opportunities. This has been exacerbated by other intersecting factors related to gender, race, ethnicity, socio-economic status and disability.

UIL UNESCO (2020) reports that throughout the pandemic, that adult and youth services have continued to offer tailor-made programmes, including skills training in the digital domain to support income-generating activities of most vulnerable residents such as unemployed people, ageing population, students from low socio-economic background, women and girls, and others. The OECD (2020b, 20) reports that:

Around three out of four OECD countries have adopted national youth strategies to shape a vision for youth and deliver youth programmes and services in a coherent manner across administrative boundaries. For instance, Canada, Greece, New Zealand, and Slovenia have operational national youth strategies that already cover aspects of youth resilience at the individual as well societal level.

The OECD also reports a number of government-led initiatives that focus on inter-generational approaches and inclusive decision-making across generations. It is also evident that there are many activities that have been developed by youth organisations themselves acting as the leaders in developing resilience, often in collaboration with governments. For example, in Tunisia, the International Organization for Youth Development¹³ has delivered online courses for young people to acquire entrepreneurial skills. There are also many examples around the world of the work of youth services in cities, particular in health education, including San Francisco¹⁴. And in Italy, the *Torino City Love* project was developed together with local companies to offer free resources and skills programmes to support citizens and businesses (ibid). In the UK, the Local Government Association (2020) makes the

¹³ See <https://www.facebook.com/IOFYD/>

¹⁴ See <https://sf.gov/covid19youthservices>

vital point in its handbook for councillors that adult and community education shapes people and place.

However, despite the potential of these sectors, it is evident certainly at a European level according to the European Commission/Council of Europe (2020) that support to youth services from local, regional and national authorities has been inadequate, and national reports such as that of the Local Government Association report similar issues for adult and community education.

The **TVET sector** is often an overlooked part of education systems, but as a recent World Bank (2020) report argues, it often contains a disproportionate number of disadvantaged students by comparison to schools. The report further argues (ibid, p. 7) 'that, when well-articulated within an overall lifelong learning system, it could be provide the skills needed to mitigate the negative impact of the pandemic', and furthermore there exist a number of past cases of epidemics where the sector has been rapid in response to skills needs. A specific example is the case of the National Ebola Training Academy in Sierra Leone which was set up to deliver clinical training modules for frontline Ebola health care workers (Jones-Konneh et al., 2017). A recent ILO-UNESCO-WB TVET provider survey¹⁵ provides many examples of contributions that the sector has made as part of emergency responses including in training not only of healthcare workers, but also of factory and call-centre workers, and in the production of materials such as masks and disinfectants.

3.3 The Role of the non-formal sector: NGOs and CSOs

During the pandemic, NGOs, community society organisations (CSOs), and non-formal learning centres stepped in to support disadvantaged and vulnerable groups, especially in contexts where national and local government services retreated from communities (Smythe, Wilbur, & Hunter, 2021) or could not reach some communities (Bandyopadhyaya & Shikha, 2020). Alongside top-down efforts from cities themselves, sometimes in co-operation with municipalities and sometimes in co-operation, they have been key in curtailing the pandemic, enabling social connections to counter isolation and related stresses, and supporting residents' learning and education. In India, for examples, CSOs distributed relief materials such as food, water, and hygiene materials; collected relevant data to communicate to relevant government departments; disseminated critical information to raise awareness among communities they serve; provided medicine, medical support, and counselling; and supported income-generating activities (Bandyopadhyaya & Shikha, 2020). They used combinations of door-to-door visits, social media campaigns, phone calls, text messages, rallies, and other such methods to reach to communities they serve (Bandyopadhyaya et al., 2021). Case Study 16 from Khulna in Bangladesh illustrates their role in providing online cultural entertainment, and Case Study 18 from Manila and Batangas the facilitation of conversations at the level of the barangay, the smallest level of municipal organisation. Also in the Philippines, in Manila, NGOs have organised supplemental education for school pupils (Case Study 17) and in Bangladesh in Dhaka, the School on the Street, was developed to tackle children's mental health (Case Study 15)

3.4 The Role of Workplaces

¹⁵ http://www.oitcenterfor.org/sites/default/files/unesco_ILO_survey.pdf

The impact of the health pandemic has been extensive for workers in both the private and public sectors. It is not simply a case of having to work from home and an acceleration of digital ways of working, but, as a McKinsey and Co (2020) report argues, about the re-skilling to adapt to new ways of working after the pandemic in order to build 'operating-model resilience'. New technologies and Artificial Intelligence (AI) have already disrupted working practices, and the pandemic has become a further disrupter. The McKinsey report proposes:

a broad reskilling agenda that develops employees' digital expertise and their cognitive, emotional, and adaptability skills. Companies can't be resilient if their workforces aren't.

There are a number of examples internationally of companies with long-standing commitments to future proofing to meet future skills needs, including the giant telecommunications company AT&T in the US through its *Future Ready* programme (Highton et al 2019). Many other workplace learning approaches have been highlighted in a comprehensive report by the Chartered Institute of Personnel and Development (CIPD) (2021) in the context of digital learning in a post-COVID economy. It remains to be seen as to whether there has been a permanent move to online learning, and that is provides an adequate substitute for face-to-face interaction. There are clearly however implications for cities. One facet of a learning city that is longstanding and which derives from thinking about regional innovation is that they are places that possess a learning infrastructure that attracts and keeps businesses in the locality (Asheim 2012). Adaptions to the learning offer of their institutions will have to reflect new post-pandemic realities, and the needs of both employees and employers.

3.5 The Role of the Private sector – Businesses and Foundations

The private sector also has an outward-looking face and can be a strong actor in supporting communities, cities, and governments, especially when the public sector is overwhelmed in time of crisis. Despite its potential and the need for a coordinated whole-of-society approach to build resilient cities, in many countries there is no governance know-how or infrastructure to engage and regulate the private sector effectively, support it during a time of need, and to share data and information (Devex Editor, 2021).

A number of private sector organisations and foundations have made responses to the pandemic, and according to the OECD (2020c) as of April 2020 had made immediate commitments of some \$US1bn to the global south and another \$US579m to countries in the north. OECD's international survey includes as prime examples support of the COVID-19 Therapeutics Accelerator, the Coalition for Epidemic Preparedness Innovation (CEPI) and the WHO Solidarity Response Fund. The top five contributors were the Bill and Melinda Gates Foundation (BMGF), BBVA Microfinance Foundation, Open Society Foundations, Wellcome Trust and the Bloomberg Philanthropies. Much of this support related to advancing vaccine research and to strengthening the health systems of fragile countries. There are documented, however, specific instances of contributions to educational interventions during the pandemic, sometimes in collaboration with educational institutions.

Many mega-corporations have joined UNESCO's Global Education Coalition¹⁶ and have made various pandemic-related commitments. Google for example has expressed a commitment to ensuring educational continuity at a global scale and have created a hub of free online training that has sought to help solve educational challenges during the pandemic. Uber has been working in partnership with other businesses and development agencies, and has reiterated its commitment to promoting gender equality through community initiatives and advocacy. Some of the activities that Uber undertook during the pandemic have been to are the free rides for teachers as schools reopen along with back-to-school kits for vulnerable families to enable a full and equitable return to school.

Other examples include the work of the Conrad N. Hilton Foundation (health and education especially for children with HIV/AIDS), Dell Foundation (non-profit and social enterprises working in health, education and community development) and the Mastercard Foundation whose work is summarised in the Appendix (Case Study 24).

A specific example includes the *Connecting Business initiative (CBI) Member Network*, a Private Sector Humanitarian Platform, which has distributed solar radios and educational kits in Madagascar, and provided educational kits in the Philippines (Pakfar and Smith, 2020). Another is a partnership of the Vodafone Foundation, refugee communities, and UNHCR, which has led to the creation of the Instant Network School, which equipped schools for refugees with multimedia hubs and digital learning materials in low-tech settings in the Democratic Republic of Congo, Kenya, Mozambique, Tanzania, and South Sudan, benefitting over 94,000 students and 1,000 teachers (UNHCR, 2021). Case Study 25 is of Togetherall, a Digital Mental Health Support Service working globally, which is supported by a tech-based growth equity investor and investment fund. It is service free to users and utilised by some 250 private and public sector organisations, including as this case from an urban UK TVET college, the education sector.

3.6 Collaborative networked provision crossing sectors, services, and communities

Strong political leadership, and a co-ordinated structure that involves multiple stakeholders at organisational through to grassroots level are amongst the key characteristics of a learning city (UNESCO UIL, 2015). We can find multiple examples of system-level educational responses to the crisis at city level, some reflecting national imperatives, some unique to individual cities and regions, and others driven by citizen groups. We are also reminded that in the context of learning cities, organisations in their entirety and their sub-components need to adopt a learning disposition (Eckert et al., 2012). This applies critically to city administrations themselves. Case Study 5 within the Construction Services wing of the **city of Helsinki** reminds us that much of the focus on learning during the pandemic has been on the components of formal educational systems (and to a lesser degree non-formal offerings) whilst largely neglecting the **organisational learning** that, as the Helsinki case study showcases, needs to be embedded within all services to support resilience.

If we consider the elements that constitute a system, the examples of cities such as Shanghai demonstrate the effectiveness of a whole-system approach. However, in most countries it is

¹⁶ See <https://globaleducationcoalition.unesco.org>

not the case that city administrations have control of the whole of the education sector, with most elements of post-compulsory education often outside their jurisdiction. Just as the OECD (1993, p.9) remarked in its seminal work of almost three decades ago, it still rings true that ‘beyond initial schooling, there is no single “system” conveniently managed by a centralised public structure’. Furthermore, colleges and universities are influenced by national priorities in cases where they are dependent on national funding, and in other cases view themselves as organisations competing in a global marketplace. Nonetheless we can observe many responses from colleges and universities that have contributed to urban responses to the pandemic within their locality, through directly supporting **community-based learning** to mitigate the effects of the pandemic including supporting **mental health** as well as **health-related skills training**, contributing to public health campaigns, harnessing scientific expertise in health-related fields through **local technology transfer**, and working in **partnership** with other providers of learning including in the delivery of **TV, radio and internet-based** provision. Also, as the OECD anticipated in its 1993 report such actions are likely to be particularly effective where an existing infrastructure that supports co-operation exists. This of course includes a learning city structure as has been demonstrated in the webinar series, *UNESCO learning cities' response to COVID-19*¹⁷, organised by UIL.

NGOs and CSOs are also not part of the jurisdiction of city administrations yet they too play a vital role in providing responses to crisis and building resilience, sometimes in isolation and in other instances in collaboration with formal providers. Furthermore, in times of crisis, community members themselves are a core part of a local resilience capacity: they are often the first to respond in diverse ways and are “present to support recovery long after the immediate risks end” (Resilient Cities Network, 2021). External aid agencies such as DVV International, working in tandem with local NGOs can play a vital role in strengthening systems that are under-resourced. Case Study 19 of DVV’s work in Armenia is a demonstration of the development of online learning capacity in the adult education sector. Additionally, response and recovery are significantly more successful when city residents/community members actively participate in creating and managing crises as it increases ownership, comprehensiveness, and inclusivity and enhances local relevance of strategies (OECD, 2020a; UNESCO, 2020a). Young people are a particularly important stakeholder as they represent a large percentage of city dwellers, are leaders of tomorrow, and have shown increased participation in community service in this time of crisis (Bandyopadhyay & Shikha, 2020).

During the pandemic, parents and guardians as community members had to assume a responsibility for organising and supporting their children’s study and socio-emotional learning and maintaining their mental and physical health from home. While this presents an opportunity as the home can be the centre of learning where family learn together and build stronger bonds (UNESCO UIL, 2020), families, especially of low socio-economic backgrounds, were not prepared for such transformation and needed and need support from a range of stakeholders to build new skills, equipment, and other resources. To support families, for example, the municipal government of the city of Lima, Peru, provided learning materials targeting different members of families to encourage and support learning and more effective and emotional communication across generations (ibid).

¹⁷ See <https://uil.unesco.org/lifelong-learning/learning-cities/gnlc-webinars-unesco-learning-cities-response-covid-19>

Digitalisation played the pivotal role in emergency responses, raising awareness about COVID-19 and related matters, and in enabling the continuity of learning, economic activity, social connection, and mutual support and aid. Digital tools facilitated the creation of online networks to bring diverse combinations of actors and stakeholders together to ensure effective answers to the pandemic. These networks were sustained through webinars, surveys, digital workshops, online platforms, and other ways. Digital tools have now become a habit and a necessity. Not only do they have the potential to reach significantly more people, including new target groups, at a lower cost, but they also reduce detrimental environmental impacts through reducing travel. For example, to reach larger numbers of the population, some cities, such as Kashan in the Islamic Republic of Iran and Chefchaouen in Morocco developed ICT-based and TV-based learning programmes on health-related issues to raise awareness in their cities (UNESCO UIL, 2020).

To support formal education, cities and other actors attempted to bridge the digital divide by providing students with mobile phones, laptops, and mobile data, and/or offering schools lessons on TV and radio. However, increase in demand for digital learning exposed stark inequalities in access to technology and the Internet, absence or lack of skills to engage with technology, as well as the limitations of available digital pedagogies which do not place sufficient focus on active participation and learner-centred activities (DVV International, 2021).

As information, participation, and services are becoming increasingly digitalised and as digital methods have proven critical for strengthened preparedness and resilience against shocks and stresses, they will remain a “new normal” post-pandemic (OECD, 2020a). Higher investment in digital infrastructure will be needed so that cities are able to deal with future emergencies and responses (UNESCO, 2020a) and maintain the current habits of working, teaching and learning from home which may be a challenge in low-resourced cities and where the digital divide is particularly wide.

4. Challenges

Digital divisions and digital exclusion have intensified since the start of the pandemic, making it impossible to carry through tasks in the digital space; as in every other sphere, the poorest are hit the hardest as they may not have **mental bandwidth** for learning new digital skills when worrying about money, food, and shelter (Burgess, n/d). These divisions have been especially great for particular groups in society, who have been traditionally disadvantaged by virtue of their personal characteristics and situation. The focus of most debate has been the learning loss experienced by children and students in higher education, but less debate has surfaced in relation to adult learning both in the formal and non-formal sectors. As we emerge from this crisis, a sector already under stress in many countries, may suffer further given likely fiscal challenges. There are likely to be **limited resources** for many organisations in the future given that they have already been grappling with diminished funds and other resources to support and maximise their work on the ground. This includes a relative lack of technology to support learning in non-formal and informal settings. Set against this trend we can observe many examples of innovation that have derived from the resilience developed during the crisis, and many forms of new partnerships in learning. The challenge will be to **capture and embed these innovations in system-level planning**.

In some cities, a lack of critical capacities that hindered citizens’ contributions to their communities in the time of crisis. For example, many staff of NGOs and CSOs in India possess

limited skills in using technology, project management, advocacy and engagement with governments, community facilitation and networking (Bandyopadhyaya & Shikha, 2020). Furthermore, for educators at all levels and in various institutions of formal and non-formal learning, there has been an unpreparedness for digital education and online modes of working and telecommuting (Boeren, Roumell, and Roessger, 2020). The challenge is to identify the precise skills each actor needs in different contexts and ensure they receive relevant training despite there potentially being a lack of funds, accessibility, and trainers with relevant capacities.

Political will may be absent in some cities to build partnerships for a whole-of-society approach. While the civil society is instrumental to build and sustain resilient cities, especially during crises such as the pandemic, some have argued that **mistrust and lack of coordination between civil society and governments** has undermined the work that civil society can do to support cities' development and cohesion (Bandyopadhyay & Shikha, 2020). By contrast, we can see positive examples of strong political will in many cities, and an understanding that a comprehensive and co-ordinated system learning structure is a foundational element in dealing with crisis. Many cities that have committed to learning city structure demonstrate a **co-ordinated approach, encompassing multiple stakeholders** and a recognition of the need for **joined-up service** provision. Yet there are few cities that can claim to have capitalised on all available capacity especially that outside the formal sector. The challenge is to overcome the limitations of existing structures and ways of working. There is a need to shift from a top-down approach to more holistic and integrated strategies that meaningfully engage a broad range of stakeholders and that does not see them simply as 'recipients' but as agents of change. This is explicit in the learning city model.

With the spread of a new and unknown virus, there has been a lot of misinformation shared on social media and in traditional media outlets. While **accessing the right information** was the most pressing service that governments and other actors have to ensure, it has been a great challenge due to the nature of social media and the overwhelming, yet unchecked volume of information shared. A key facet of the learning response in many cities has been initiatives to counter misinformation. For the education system as a whole, and more widely in non-formal learning approaches, the challenge is to enhance information literacy especially in the context of social media platforms.

If anything has been learnt during the COVID-19 pandemic is that we are all inter-connected and that our responses need to be both global and local. Some cities recognise this, and importance of sharing experiences, whilst recognising the limitations of wholesale transfer of practices because of particular cultural and political traditions. The challenges are to create reliable online platforms for sharing practices that reflect diversity of languages and differential access to information and communications technologies, and to contextualise practices from other places to fit other local realities.

5. Recommendations

Context-relevant development and resilience-building

As crises such as the COVID-19 pandemic have asymmetrical impacts across contexts depending on socio-economic, cultural, and environmental characteristics of a place, responses should be place-based and people-centred to be effective (OECD, 2020a). This includes 1/ collaboratively developing a contextually relevant and easily operationalised definition of resilience and a shared vision and objective for all actors to follow, 2/

collaboratively designing a plan of resilience-building action, 3/ drawing on local capacities and resources to enact it and 4/ recognising the importance of sharing practices on a global scale and limitations of thereof .

Simultaneously addressing a crisis and the root causes of disparities, including systemic causes.

In order to ensure that future crises are prevented or mitigated, any short-term humanitarian intervention should be accompanied by a resilience-building activity – a long-term vision and action plan that aims to understand and address deep-rooted issues that create disparities in society. As regards learning systems, that should include rethinking the way we teach and learn, and whether it contributes to sustainable development and redressing existing injustices and inequities.

Capacity strengthening of actors and stakeholders

For diverse actors and stakeholders to contribute to building resilient cities in different ways, they need to both acquire and strengthen capacities. In this regard, the role of adult and youth learning services and related organisations should be augmented and intensified to enable residents of all ages, backgrounds, and walks of life to participate in society more responsibly. This includes through contributing to environmental, civic, and health education and digital awareness, and to guard against citizens falling prey to conspiracy theories and unwarranted fears (DVV International, 2021). These organisations are closer to citizens in cities than much of the formal sector; yet in many countries they have historically been under-resourced and that is likely to exacerbated as we emerge from crisis.

Diverse other learning channels and modalities should be explored to equip residents with necessary knowledge so that they can act in their and their community's best interest. The approach and message needs to be tailored to different groups to be able to address their specific ethnic, religious, gender, learning ability, and ultimately their resilience. The non-formal sector as represented by adult education and youth services, often organised through NGOs, as well as CSOs, are well-placed to do so in comprehensive and well-planning learning systems

Joined-up planning and service provision

It is evident that the educational challenges of the pandemic require a response from cities that is not only from that part of education for which they have responsibility, but from all stakeholders within the local learning ecosystem. The importance of developing a structure that brings together all providers and citizen groups is vital, and in that structure to facilitate both adequate supply of learning provision, but also the capacity to respond to citizen demands (see Osborne and Hernandez, 2021). It is also vital that city administrations themselves adopt an organisational learning perspective across their services, and that their services work in synergy. The learning challenges of COVID-19 will not be solved by Educational services alone. The Learning City model envisages learning as foundational to all services, and cities that adopt it must address how they learn themselves.

A global perspective

It is clear that there is much that can be learnt by sharing practice, whilst recognising the limitations of uncritical and inappropriate transfer from one place to another. Nonetheless,

networks that exchange practice such as those set up by UIL and other organisations such as the PASCAL Observatory are vital.

Intergenerational learning

Partnerships should be built among different relevant actors to create a conducive learning environment and an opportunity for mutual learning across generations at home, community, and school. Adult education and lifelong learning in particular can support intergenerational learning by equipping adults with required skills, especially in relation to digital literacy. Increasing and improving adult education and lifelong learning opportunities can help families in coping and understanding how to support their children's and their own well-being during and after the crisis (Nesterova, 2020).

Strengthening adult education in the community and in the workplace

Adult education is able to provide everyone 'a fair chance to develop their abilities and to put them to valuable use' (Boeren, Roumell, and Roessger, 2020, p. 203). As OECD (2021) shows, there is ample evidence that adult learning does not only help to maintain and upgrade skills and competences and have a positive impact on wages and productivity, but it also strengthens workers' resilience to shocks. Wilson, Osborne and Guevara (2018) articulate the important role that adult education has through networks, particularly in the global south, that develop the resilience to tackle the challenges of crises, It is important therefore to adequately resource the adult education sector, and recognise its vital community and resilience building role as it is often along with youth services the closest agency to citizens. It is also clear that changes in the nature of work, and the needs of skilling and re-skilling will require responses from providers.

Often relegated because of the imperative of social inclusion is the role of the learning city in supporting economic development. It is important that cities corral their learning providers to offer comprehensive services to support the needs of workers and businesses. It is equally important that employers themselves make contributions not only to supporting the resilience of their own workers through skills training as well as broader learning opportunities, but also as part of their corporate citizen role offer their learning resources to the cities where they are located. The track record of businesses, especially small to medium-sized enterprises (see OECD 2019), in relation to providing training is not optimal, and wider contributions are rare. We recommend much stronger engagement of businesses with their cities in this regard.

Platforms for public engagement and cooperation

Cities need to have a supportive, transparent, and enabling environment and system for their institutions, organisations, and residents to share information, provide feedback on the delivery of services and plan public spaces, hold authorities accountable, work together and support each other to manage risks and build resilience.

Digital spaces and skills

We need to ensure and strengthen access to digital spaces and digital capabilities training to decrease and eliminate the divide across geographies and groups and enable everyone to operate in the digital world. This includes ensuring that everyone understands the importance and benefits of acquiring digital skills and has a device to connect to educational, learning,

and other opportunities. Libraries, community centres, volunteers, and educational institutions need to be supported and funded to provide such services to all in need.

Building strong relationships with and supporting the private sector

The private sector has financial and other resources, relevant capacities and expertise, and potentially alternative ways of approaching challenges and finding solutions. Fostering partnerships between the public and private sectors will help to mitigate challenges and harms and leverage opportunities to meet long-term vision of sustainable development. For this, governments need to develop supportive policies to ensure that the private sector can thrive and benefit the communities they work in and create spaces where relationships and trust between the sectors can be nurtured.

Case studies/examples of good practice for further research on the topic

I. City, regional, and local governments

In many countries around the world there have been national level initiatives that have been concerned with public health education, some of which have been translated into regional, city and local developments. Regions, cities and even smaller localities have themselves have also taken the lead in educational responses to the pandemic with a particular focus on public health awareness and ensuring continuity of existing formal education services.

Case Study 1 - City of Berlin (Corona Podcasts for refugees)

Berlin's State Office for Refugee Matters¹⁸ accommodates about 20,000 **refugees** in 83 facilities. In order to ensure that everyone is well informed and empowered to protect themselves and others, the state office has been producing and sharing the information in the form of information sheets, podcasts and videos. To reach as many clients as possible, these materials are produced in Arabic, English, Farsi, French, Kurdish, Romanian, Russian, Turkish and Vietnamese. These media pieces are mostly targeted to increase the awareness regarding the COVID-19 pandemic—infection protection, different support services (including psychological support) that are available to the refugee communities and about the vaccination programme. It seems clear that podcasts and videos in multiple languages can be effective in reaching a larger and diverse refugee community. Content of this media can be designed to cover the wider aspect of the pandemic, which not only helps in infection protection, but can help improve the resilience of the vulnerable refugees.

Case Study 2 - City of Brasília (Videos Help Hearing Impaired People)

The Extraordinary Secretariat for Persons with Disabilities (Secretaria Extraordinária da Pessoa com Deficiência)¹⁹, which is subordinate to the Executive Office of the President in Brazil has recognised in a country which has been particularly ravaged by COVID-19, the particular challenges faced by the disabled. It has put particular attention towards the hearing-impaired and those using wheelchairs and other mobility problems. For example, it launched **sign language videos** with subtitles so that people with hearing impairment could have access more readily to the recommendations to prevent the spread of the pandemic such as hand-washing. In the Federal District of Brasília, there are more than 600,000 people with some form of disabilities, the majority of which are level below the poverty level. This initiative is a supplementary action to the home visits being offered to the families with a disabled member.

¹⁸ See <https://uil.unesco.org/lifelong-learning/learning-cities/webinar-series-learning-cities-covid-19-recovery-research-practice>: https://www.berlin.de/laf/leistungen/gesundheit/infektionsschutz/#podcast_allgemein and <https://www.berlin.de/en/news/coronavirus/6338383-6098215-new-corona-podcast-for-refugees-in-thirt.en.html>

¹⁹ See: <https://agenciabrasilia.df.gov.br/2020/03/21/videos-em-libras-sobre-o-coronavirus-ajudam-a-atender-pessoas-com-deficiencia-auditiva/>

Case Study 3 - City of Bogotá²⁰ (Community-based learning for citizens and health professionals)

The city of Bogotá has offered a range of forms of support linking education, health and well-being, focusing on formal educational provision, the training of health professionals and informal learning of citizens in the community. Four examples are illustrative of the breadth of its innovations.

- Art education has been used as a vehicle to address mental health issues, through a 'time capsule' use to capture emotions and feelings of people is multi-media form.
- Health promoters in the community, who have been involved with citizens on a daily basis, for instance in the delivery of food or in drug stores, have facilitated informal learning of healthy behaviours through their day-to-day activities.
- Health professionals have been trained to deal in new ways with patients in response to pandemic issues. Using a virtual education platform some 35,000 people have been trained in this regard.
- The *BiblioRed* initiative, the digital library of the city Bogotá, has launched several activities, including a virtual meeting space for residents to discuss various literary topics and *Experimental LAB – Family Knowledge sharing* to recreate social and intergenerational ties through creative means to support home-schooling and parenting.

Case Study 4 - City of Glasgow (Connected Learning in schools)

Access to digital technology is particularly important for young people's education and development. Lack of access to digital hardware and technology significantly limits the development of digital literacy. Digital exclusion contributes to widening the attainment gap, and limits development opportunities among young people. In July 2020, the Scottish Government offered a one-year grant to all local authorities to tackle digital exclusion and provide equal access to education and opportunities for all pupils regardless of their circumstances. Education Services in Glasgow received £3.1m of funding and purchased a range of equipment which has been delivered to the most disadvantaged pupils across the city. Additional funding was allocated in February 2021 for the provision of additional digital devices and connectivity solutions for disadvantaged children and young people.

Since 2018, Education Services in Glasgow had been planning and developing their approach to digital learning: the pandemic accelerated this process. As part of the **Connected Learning** program in Glasgow, all pupils attending *Additional Support for Learning* schools (ASL), primary 7 pupils, and young people in secondary schools have their own iPads. Consequently, only pupils from primary 1 to primary 6 have been considered for an iPad or Chromebook from the Digital Inclusion grant. Education Services Headquarters, Headteachers and Digital Leaders of Learning based in schools worked together to identify pupils to be prioritised. Schools used a variety of methods including online surveys and individual phone calls to identify families and children who did not have access to devices at

²⁰ This account is derived from a presentation made by Ms Sara Valencia, Director of Districts Research Centre for Health Education in the city at a UIL/PASCAL webinar on 16 December 2020. See <https://uil.unesco.org/lifelong-learning/learning-cities/webinar-series-learning-cities-covid-19-recovery-research-practice>

home. By the end of 2020, Education Services purchased and delivered to primary school pupils 7,240 iPads/Chromebooks. The project is ongoing and delivering more devices as part of phase 2. As a result, all households with a Glasgow school pupil now have access to at least one digital device as well as internet connectivity.

Including and beyond this initiative, an Education Services research team together with Glasgow Psychological Services have produced reflections on varying aspects of education in the city, considering the impact of COVID-19 on staff, children and their families, under the overall banner of Recovery, Resilience and Reconnection 2020²¹.

Case Study 5 - City of Helsinki – Organisational Learning in the Construction Services

As a response to the pandemic exceptional circumstances were declared in Finland on 16 March 2020 and at the same time, a new Emergency Powers Act was introduced. From Spring 2020, internal movement was restricted in Finland in a unique way when Uusimaa, the area surrounding the Helsinki Metropolitan Area, was isolated from the rest of the country to prevent the spread of the virus. At the same time, schoolchildren switched to distance learning and employees to remote working.

Whilst the experiences of the pandemic have produced a wealth of additional material on the development of expertise in exceptional circumstances, much of this has focused on the study of the education system and its working methods (Engelbrecht et al. 2021). By contrast, there are very few systematic representations of **learning in organisations**.

Stara²² is the City of Helsinki's Construction Services company. It provides services related to construction, maintenance and logistics in urban environment for the City of Helsinki. Stara has just over 1,400 employees, and provides an interesting case of organisation learning in a time of crisis. In Stara, key construction and maintenance functions largely did not have to be redefined in respect of the COVID-19 pandemic. However, protection measures in line with pandemic guidelines required adaptation and learning at the individual and small group levels. The organisational interfaces with the city Helsinki's other services and the public sector overall faced new and, in some cases, surprising challenges, the response to which required the reorganisation and re-learning of operations.

The reaction to the crisis itself was systematic, especially in the management of interfaces. There were chaotic elements in the early stages of the crisis, the manageability of which improved as the crisis progressed. The division of labour between the various actors and the common rules of the network of public sector actors became more precise when the administration was able to organise itself in the maintenance phase of the protracted crisis. An important lesson in Helsinki, is that by adopting an organisational learning perspective towards the management of emergency conditions, there may be transfer and consolidation of good practices created during exceptional circumstances into normal operations.

²¹ See <https://glasgow.gov.uk/article/25947/Recovery-Resilience-and-Reconnection-2020>. Specific information on the Digital Strategy which overall has delivered over 55,000 iPads and established 4,200 internet hotspots is found at <https://www.glasgow.gov.uk/index.aspx?articleid=26828>

²² See <https://www.hel.fi/stara/en>

Case Study 6 - India (Digital Infrastructure for School Education)

Since educational institutes closed due to the COVID-19 pandemic, the Government of India has been encouraging online education to achieve academic continuity. Most high-end private and public institutions have transitioned smoothly to online platforms; many other schools are still finding it a herculean task. A fundamental enabler for online education is the digital infrastructure, which includes high-speed internet and supporting devices such as desktops, laptops, tablets or mobile phones. These prerequisites have expanded the gap between upper-, middle- and low-income groups, as well as urban-rural areas and male-female sections of India. The infrastructure challenges in online education have resulted in a digital divide and rendered unprivileged learners helpless and are pushing a large number of children out of school.

Nonetheless there are positive stories. **DIKSHA (Digital Infrastructure for School Education)**²³, an online learning platform launched by the Government of India in 2017, has emerged as a key tool for teachers and students during the Covid-19 pandemic for continuing their academic studies. The platform is also used to deliver training for frontline workers dealing with the pandemic, the Integrated Government Online Training” (iGOT) portal.

TV Channels and Radio are also being used to reach out to the remote areas. The 32 DTH²⁴ (direct-to-home broadcasting service) TV channels are available on Swayam Prabha²⁵. These channels are available for viewing across the country using the Doordarshan Free Dish Set Box and Antenna. Furthermore, extensive use is being made of some 289 Community Radio Stations to broadcast educational programmes for the National Institute of Open Schooling (NIOS) for grades 9 to 12 school pupils. Radio is used specially for those children in remote areas who are not online (specially for grades 1 to 5) with activity-based learning being very effective through radio channels.

At state level a number of discrete ICT-based initiatives focused on schooling have been documented by Sharma (2021)²⁶, including:

- **Chhattisgarh** - Education at your doorstep Initiative
- **Kerala** Infrastructure and Technology for Education (KITE)²⁷
- **Madhya Pradesh** - DigiLEP Initiative
- **Maharashtra** - The Learning from Home Package

²³ See <https://diksha.gov.in/>

²⁴ In India, direct-to-home (DTH) Broadcasting Service refers to the distribution of multi-channel TV programmes in Ku Band by using a satellite system by providing TV signals direct to subscribers' premises.

²⁵ The SWAYAM PRABHA is a group of 34 DTH channels devoted to telecasting of high-quality educational programmes on 24x7 basis using the GSAT-15 satellite. Every day, there will be new content for at least (4) hours which would be repeated 5 more times in a day, allowing the students to choose the time of their convenience.

²⁶ Sharma, A. (2021) Education through ICT Initiatives during the Pandemic in India. CSD Working Paper Series Towards a New Indian Model of Information and Communications Technology-Led Growth and Development. New York: Centre for Sustainable Development, Earth Institute, Columbia University. https://csd.columbia.edu/sites/default/files/content/docs/ICT%20India/Papers/ICT_India_Working_Paper_42.pdf

²⁷ <https://kite.kerala.gov.in/KITE/>

Case Study 7 - City of Lucca (Maintaining Emotional Bonds in Families)

The city of Lucca in Italy has developed online approaches to provide advice to families to maintain an emotional bonds with and care for children during the period of absence from schools. This has included activities to support and facilitate exploration, play, discovery, movement and self-knowledge, and has been manifested in singing and welcome rituals for groups of children and families, animated readings, and other workshop experiences and teacher/children/parent interactions.

There has been a focus on families children attending public early-childhood educational services in the municipality of Lucca, and have been linked to a wider regional strategy. The initiatives were funded and strongly supported by the Region of Tuscany through a project aimed at supporting the level 0-3 educational services system during the pandemic and lockdown, entitled "*Education 0-6 years does not stop*".

The municipality has also constructed a dedicated website²⁸ 'Growing together by sharing with families' with a section dedicated to the relationship between families and children aged from 0-3 years, *United from afar*, which contains video reflections links to resources intended to enhance well-being. Multi-media platforms have been used for remote nursery-family communication and for meetings with experts

Case Study 8 - City of Medellín (Inter-sectoral co-operation in producing customised PPE for children)

During the COVID-19 pandemic, the design and production of personal protective equipment (PPE) has largely focused on health care personnel. However, emerging social dynamics requires the development of safe solutions to allow equally vulnerable populations to make the transition from quarantine to controlled social distancing. The learning City of Medellín has focused on the design and production of PPEs tailored to the needs of children in such a way that they can return to school safely, and at the same protect their teachers from infection. A project initiated by the city and with the cooperation of different multi-disciplinary workgroups from the public sector, business and non-profit organizations has led to the design and manufacture of these PPEs. The research and product development processes have been carried out in Higher Education Institutions (HEIs) (Universidad Nacional de Colombia, Universidad de Antioquia and Institución Universitaria Pascual Bravo), in collaboration with the public sector (Ministerio de Ciencia y Tecnología de Colombia and the Secretaría de Educación de Medellín).

This has been complemented by the creation of a learning platform to raise awareness about "caring for oneself and the others" in order to enhance the acceptance and appropriation of these PPEs. They will be distributed without cost to vulnerable communities in the city, with 150,000 units planned to be manufactured and distributed to publicly funded schools.

Case Study 9 - City of Melton (Community Connector Hubs, Community Learning and a Learning Festival)

²⁸ See <http://www.comune.lucca.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/21139>

In the City of Melton in Australia there has been a focus through the Council's Community Activation and Learning Team to developing three **Community Connector Hubs** with a range of functions (Food Relief, Care Packs, Financial Counselling, Mental Health Counselling, Targeted Social Connections, Job Readiness, Connector Service and Digital Connection)

The city engaged local tutors, businesses and service providers in order to film and deliver pre-recorded and live online **community learning** sessions for the community to access through YouTube during lengthy lockdowns of 2020. The videos featured many local tutors who would normally make an income delivering face-to-face programs. Recording these videos not only gave residents at home an opportunity to keep learning while in lockdown, but it also provided these tutors the ability to maintain some income that they had lost due to the closure of community facilities. Since its inception the Melton Learning Directory YouTube channel has published 153 videos, attracted over 1,500 subscribers, and achieved over 157,000 views. It has also in recognition of the challenges of unemployment runs courses on **job readiness**, including a focus on employment rights. The city has also celebrated learning through the **Melton Lifelong Learning Festival** delivered online in November 2020; this contained 104 free events from 35 host organisations with up to 120 participants per event.

Case Study 10 - Melbourne Metropolitan Area, Australia (LearnWest Network - Learning for Earning Festival)

Continuing the Learning Festival theme, and also focused on the sub-urban cities of the western metropolitan region of Melbourne, The LearnWest Network, a community of practice comprising six Local Government Areas (LGA) learning communities, collaborated to design and implement the inaugural **Learning for Earning Festival**²⁹ which ran in May 2021. This free 3-day virtual event was designed to help upskill people and look at different pathways to employment.

The six council areas in the West of Melbourne all had had similar experiences and challenges emerging out of COVID-19. As a result of the pandemic, these communities had lost **jobs, financial security, and confidence**. Additionally, mental health and wellbeing issues were increasing and more broadly all signs were indicating that our communities were hurting. The Network agreed that by pooling resources and networks/contacts, project outcomes would be maximised.

The festival aimed to support and enhance communities in a united way to gain knowledge in starting or changing careers, including upskilling and understanding dominant and emerging industries and opportunities for the future. It offered 30, one-hour live online events based around six key streams across the three days, plus several pre-recorded events. These streams were: Learning; Skills; Career Planning and Pathways; Employment; Industry; and Business and Entrepreneurship. The website for the festival website continues to host links to many employment opportunities in the west of Melbourne. The role of the festival links to the overall **learning community strategy** of the partner cities, including for example that of the city of Wyndham³⁰

Case Study 11 - Rwanda (Interactive Radio Learning for children)

²⁹ See <https://www.learnwest.org>

³⁰ See <https://www.wyndham.vic.gov.au/learning-community-strategy-2018-2023>

In response to Covid-19 in Rwanda the government initiated a programme of learning for school pupils using broadcast media (mainly radio) in partnership with UNICEF, whilst some private mainly international schools adopted other specific ways to assist their students. The government initiative built on an existing partnership with the national NGO Inspire, Educate, Empower (IEE) and Rwanda Broadcasting Agency to produce and air programmes throughout the country³¹.

The initiative was mostly directed to school students from low-income households with unreliable internet access, who could not access e-learning resources. By contrast university students and children from high-income families attending international high schools, the shift to remote/home learning was rapidly enhanced by digitally supported tools at their disposal both at their institutions and at home.

Some 144 scripts for lessons concerned with primary level numeracy and literacy were sourced from other countries by UNICEF. These were then adapted to align with the national curriculum and recorded in multimedia studios. Lessons were then broadcasted on selected public and private TV and radio stations with a weekly-based timetable. Each TV/radio lesson was approximately 20 minutes long and focused on interactive learning. Lessons were designed so that students could participate individually, but importantly parents and caregivers were also encouraged to listen in and thereby support learning at home.

Case Study 12 - City of Wolverhampton (100% Digitally Included Capacity Building Initiative)

In the City of Wolverhampton in the UK, the COVID-19 crisis has highlighted the importance of digital connectivity, essential to access remote learning, employment support and employment and reduce isolation. However, access was limited due to lack of equipment, connectivity, and confidence/skills. Local intelligence during the first lockdown (2020) highlighted that 50% of adult education learners, nine out of ten people on a basic skills course, 60% of residents on the city's 'Wolves at Work' programme and 25% young people on the 'Impact' programme were unable to access remote learning or employment support due to lack of devices and/or connectivity.

As part of Wolverhampton's city-wide **100% Digitally Included Wolverhampton** priority, a range of projects and initiatives have been actioned as part of the Covid-19 response to support residents to get online, improve digital skills and progress to further learning and these are continually evolving and responsive to residents' needs. This included launch of **Wolves Online**³², a device and connectivity lending scheme through a network of trusted partners who had existing relationships with residents and could provide support to get online. Wolverhampton City Learning Region (WCLR) coordinated a city-wide bid to the local authority for funding to support a **100% Digitally Included Capacity Building initiative** to reach the most excluded residents in the city providing the intensive support required to get online / learn digital skills and build capacity of the trusted partner network (YMCA, A2B, Beacon Centre, TLC College, Jobchange and Bilston Resource Centre). WCLR acted as an umbrella to ensure that a coordinated and inclusive whole-of-city approach was adopted to support voluntary and community sector (VCS) learning providers to come together to develop a '**one partnership**' approach in bidding for funding. These schemes

³¹ <https://www.unicef.org/rwanda/stories/radio-learning-time-coronavirus>

³² See <https://www.digitalwolves.co.uk/>

complement other initiatives in the city such as *Support to Connect*, part of social prescribing, supporting individuals to get online to support health. Furthermore, the **Digital Buddies Network**³³ is developing and recruiting volunteers to provide support to residents.

II. The Non-Formal Sector

There are a number of examples of the non-formal sector undertaking initiatives that provide learning opportunity that has been directed towards health and well-being, including addressing mental health issues, and towards support economic recovery by focusing on employability.

A number of cases can be found within cities in **Australia**, where the library service has played a key role in the tradition of many learning city developments in the country. Two examples can be found in the cities of **Brimbank** and **Canning**.

Case Study 13 - City of Brimbank (Boomers to Zoomers Programme)

Brimbank is city to the west of central Melbourne in Australia with a population that has a preponderance of citizens with low socio-economic status³⁴. During the pandemic the city re-developed all of its learning programs to online mode and communicated with its clientele through the web and using social media. It offered a comprehensive range virtual learning programs ranging from online story times to science activities for children, wellbeing programs for adults, virtual book groups, and job search support seminars and workshops for adults. Of particular interest has been the focus on the health and well-being of **older adults**, based on a realisation from library staff of the relative lack of digital access and literacy of those in the 'third age' (over 50). This was a concerted programme that started with telephone calls and led to tuition on how to use the Zoom platform through to developing the capacity to use the city's learning offer as well as offers elsewhere in the world. The *Boomers to Zoomers* initiative enabled the library to contact groups that had previous met face-to-face for its various programs such as Practice Your English and Coffee and Chat, and continue to offer those programs virtually. Coffee and Chat became Connect and Chat to reflect the new format of the program, requiring participants to connect online.

Case Study 14 - City of Canning (Work Ready programme)

In the city of Canning in Australia, libraries have had a longstanding role in supporting jobseekers through access to public computers, digital support and offering employment-related programs related to such matters as resume writing and interview skills. The **Work Ready** project built on this history and has been a city initiative led by the library services. It has been driven by community feedback and concerns relating to the potential implications of the pandemic on job prospects, which carry concomitant health implications. Stakeholders engaged were both internal to the city and external, including employment services providers and not-for-profit organisation, to deliver the program face-to face within the libraries, which are recognised as safe, trusted and neutral community spaces, and in virtual model, the *Canning Employment Hub*³⁵. Existing relationships with external partners were used to modify delivery from intensive one on one mentoring model through the

³³ See <https://www.wolverhamptonvsc.org.uk/become-a-digital-buddy/>

³⁴ See <https://www.brimbank.vic.gov.au>. An example of a Boomer to Zoomer event run by the library service is found at this link - <https://www.brimbanklibraries.vic.gov.au/index.php/what-s-on/book-an-event/special-events/35566-help-your-boomer-become-a-zoomer-during-get-online-week>

³⁵ See <https://www.connectincanning.com.au/work-ready>

Kaleidoscope program, which was available only to skilled migrants with strict eligibility criteria, to a wider general employment skills program open to all community members. Identifying that other organisations were also working towards similar goals, strengthened the cities connections and relationships with Not-for-Profits such as Anglicare and Zonta House (Domestic Violence Emergency support). Partnerships allowed the development of more targeted support to job seekers who face additional barriers (namely **people with disabilities, refugees/migrants, young people and women at risk of homelessness**) The city is now collaborating with a number of partners, including a number of Indigenous organisations, to deliver tailored employment and mentoring support (as developed through Work Ready) to the **Aboriginal and Torres Strait Islander** community. In light of a review of the programme in December 2020, it was recognised the employment rates had not dropped as dramatically as anticipated, but that targeting of services towards those with low digital skills should be prioritised and In light of review findings, the City realigned the project with a greater focus on targeting individuals with low digital skills, and refocusing on the promotion of the program to better reach cultural and linguistically diverse communities the most vulnerable parts of the city's community who were more likely to be at disadvantage in terms of job loss and employment prospects.

The NGO sector has also worked quite autonomously from cities and governments. As in other countries, the Government of Bangladesh introduced remote learning through television, mobile phones, radio, and the Internet, but apart from government-provided formal education, many individuals and NGOs have initiated activities beyond formal education to cope with the pandemic situation. A number of small-scale examples from the cities of Dacca and Khulna illustrate this.

Case Study 15 - City of Dhaka (School on the Street – Children's Mental Health)

Pother Ishkul³⁶ (School on the street), a private organisation in Dhaka, the capital of Bangladesh with a population of some 8.75m people. The organisation mainly works with street children and other underprivileged children in the Gulistan Park area aged three years to 18 years. It is an *open sky* school with no use of technology that was started in 2015. It has provided activity-based learning for the development of **children's mental health and moral development**; Pother Ishkul also provides food for education. After completing lessons, following an evaluation of their learning, students are provided with a token to collect food of their own choice from a selected venue.

The organisation provides entertainment-based practical learning through alphabet learning, and storytelling, music, crafts, and scouting. The aim is to develop these growing children's mental health and educate them to manage their lives better when they are adults. During the pandemic, the number of children taking up this initiative has increased and the classes are held seven days a week (as against two per week previously) largely because of the incorporation of the food for education approach.

This grassroots level initiative is a **multi-sectoral coalition**. It was started by a group of college and university students, and also includes employees from NGOs and business people. There are now some 20 members of Pother Ishkul, volunteering to manage this informal initiative, using funds from their friends and family to run this program.

Case Study 16 - City of Khulna (Online cultural entertainment)

³⁶ See https://www.facebook.com/potherishkul/?ref=page_internal

Whilst the internet has had many positive effects during the COVID-19 lockdown, some children (and indeed adults) have taken refuge in the virtual world using it purely for entertainment and escapism, which may have negative social and health effects. Some informal initiatives have sought to create balance by focusing on the educative qualities of the internet. **Rongmohol**³⁷ is a private organisation within Khulna³⁸, a medium-sized city of some 660k people in Bangladesh. The organization working to educate young people between 12 and 25 years, beyond the formal education sector through online cultural entertainment. During the pandemic, they have been running series of online workshops on the life history of poets using Facebook as a platform with the aim of educating young people about the country's traditions and culture in an entertaining way. It is a grassroots level initiative initiated by college and university students, and uses workshop speakers of the that include employees of the National Children Task Force and Bangladesh National Child Parliament who have prior knowledge of working with deprived children.

Case Study 17 - City of Manila (Eskwelang Pamilya – supplemental education)

AHA! Learning Center is a non-profit learning centre based in Makati and Tondo, Manila. Prior to the declaration of the community lockdown in the Philippines, the centre was an after-school learning centre supplementing education by working with both children and their parents. Following the imposition of community lockdowns in the country, the AHA! Learning Center developed Eskwelang Pamilya³⁹ with the following aims:

- To keep families informed and calm (to simply explain government initiatives);
- To help further their reading and writing skills;
- To help kids adjust to the new normal; and
- To provide parents with a venue where they can air out their concerns and be in touch with medical professionals.

Eskwelang Pamilya, as described by the AHA! Learning Center, is “an education solution built for the lockdown” as it is “a free text-based Facebook school for public school kids in the time of COVID-19 that encourages the participation of not only the students but the family”. Facebook is the most widely used platform in the Philippines and is accessible even in the absence of access to the Internet. The initiative is directed towards Filipino state school students—elementary and high school levels—and neighbourhoods with high poverty. It started in 2020 with some 21 public schools in several locations including Tondo in the City of Manila. It has now reached more than 3 million students all over the country.

Case Study 18 - Manila and Batangas (Talakalayaan – a platform for conversations at neighbourhood level)

Talakalayaan in the Philippines **started** as a simple platform of **conversations and writing workshops** with only the members of NGO, the Centre for Neighbourhood Studies

³⁷ See <https://www.facebook.com/Rongmoholofficial>

³⁸ A full description of urban policies in Dacca and Khulna can be found at <http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/06/Research-Report-Bangladesh-National-Urban-Policies-and-City-Profiles-for-Dhaka-and-Khulna.pdf>

³⁹ See <https://www.ahalearningcenter.com/eswelang-pamilya>. ‘Eskwela’ is a Filipino word for school while ‘pamilya’ is a Filipino word for family.

(CeNS)⁴⁰, as participants. Its initial major output, Talakalayaan was a primer for local chief executives in recognition of the critical roles that barangays— the basic local government unit in the Philippines—play in the fight against COVID-19. The first Talakalayaan that was opened to the general public was a two-part forum entitled *Filipino Neighbourhoods in Quarantine: A Forum on Neighbourhood Governance*, and held during the COVID- 19 Pandemic featuring neighbourhoods in the City of Manila and Batangas City. The Centre organised the forum in partnership with CIFAL Philippines, University of the Philippines Resilience Institute, Batangas City Government, and six partner barangays primarily to tackle the challenges faced by neighbourhoods in preventing, containing, and mitigating COVID-19. This two-part forum also formed part of the paper entitled *Filipino Neighbourhoods in Quarantine: COVID-19 Pandemic Study* published by the Centre for Sustainable Healthy Learning Cities and Neighbourhoods⁴¹.

Its most recent contribution in July 2020 aims to present the case of the Laura and Beatriz neighbourhood's experience concerning partnerships for health care and service provision and continuing health awareness through its *Komisyon ng Kalusugan* (Health Commission) program and services offered in the Lingap Pangkalusugan centre. Primarily focusing on the gains, challenges, and prospects for sustainability of the program, the discussion has sought to identify lessons and good practices that other neighbourhoods and researchers and advocates of neighbourhood studies, health, and sustainable development can learn from.

Case Study 19 - DVV International and local partners in Armenia (online capacity building of adult educators)

In Armenia during the pandemic, the adult education sector has been challenged in many ways, and with face-to-face teaching prohibited, online solutions were required. However, there was a relative lack of digital skills among many vocational trainers in comparison with the school and higher education sectors, especially in fields such as catering, hairdressing and manicuring. DVV International Armenia⁴² developed and then ran a blended learning course to give trainers of partner adult education centres (AEC) an overview of teaching and learning in blended mode, and introduction to the necessary tools and technologies for delivery. Courses were followed by mentorship programmes. By the end of the initiative, 14 courses and 50 resources had been developed.

III. Universities

Universities around the world have been engaged in adapting the delivery of their curriculum to students by using a variety of forms of Information and Communication Technologies (ICTs) and allied support systems. We illustrate this with one from a myriad of examples, using a case from Shanghai in China. Beyond this universities had also developed new provision to support COVID-19 efforts directly as the case from the London School of Hygiene and Tropical Medicine illustrates. They have also drawn upon specific technical and psychological expertise

⁴⁰ See <https://cens.ph>

⁴¹ See <http://www.centreforsustainablecities.ac.uk/news/centre-for-neighbourhood-studies-filipino-neighbourhoods-in-quarantine-a-forum-on-neighborhood-governance-during-the-covid-19-pandemic/>

⁴² See <https://www.dvv-international.ge/armenia/news/article/covid-19-as-an-opportunity-online-capacity-building-in-armenia>

in the support of local communities in health-related educational interventions, as the two examples from Russia in Ekaterinburg and Rostov illustrate.

Case Study 20 - Shanghai Open University (SOU) and East China Normal University (ECNU) (Open and Online Learning)

A report from the UNESCO Institute for Information Technologies in Education (IITE) (2020)⁴³ produced in partnership with Shanghai Open University (SOU) and East China Normal University (ECNU) gives a comprehensive overview of the measures taken by one mega-city, part of UIL's GLCN. This covers responses to COVID-19 that cover pre-school education, basic school education, vocational education, higher education and lifelong learning, and demonstrates a co-ordinated effort by the Shanghai Municipal Education Commission under the guidance of national Ministry of Education in China.

The IITE report includes case studies demonstrating activities undertaken by universities in the city, two of which are summarised below, and which are typical of the forms of support found at many universities internationally.

1. East China Normal University⁴⁴, a comprehensive research-oriented public university like many universities around the world converted many of its **programmes to online form**, delivering learning in both asynchronous (web-based materials, e-mail) and synchronous ways (live streaming, telephone and chatrooms with tutors). Given concerns about the employment prospects of students, in addition ECNU counsellors also offer career guidance online
2. New York University Shanghai⁴⁵ which is run by New York University and East China Normal University provides an example of how one university amongst many in the world adapted its teaching materials for **delivery on a global scale**. This involved the use of the now ubiquitous Zoom platform with presentations either delivered live (and later available as recordings) or pre-recorded. Other small group-based interactions between teachers and students were facilitated by video conferences, e-mail, and WeChat group chat.

Case Study 21 - Public Health England and London School of Hygiene & Tropical Medicine (COVID-19: Psychological First Aid in Africa)

Public Health England and London School of Hygiene & Tropical Medicine⁴⁶ came together and using the platform of the MOOC provider Future Learn have been offering **online course targeting the frontline health workers** in Africa. The course is designed to recognise the mental health impacts of COVID-19 pandemic and provide appropriate Psychological First Aid (PFA). The free online course, which is explained as being simple yet holistic has helped the health workers identify who are more at risk and take appropriate actions. So far, more than 1900 health workers have enrolled the course.

⁴³ UNESCO Institute for Information Technologies in Education (2020) Online and Open Education in Shanghai: Emergency Response and Innovative Practice during COVID-19 Pandemic. Moscow: UNESCO IITE

⁴⁴ See <https://www.ecnu.edu.cn/>

⁴⁵ See <https://shanghai.nyu.edu/>

⁴⁶ <https://www.futurelearn.com/courses/psychological-first-aid-covid-19-responders-african-countries>

The consideration given to the cultural and social context of Africa makes it a preferred choice among the health workers. The reviews from the participants attending the course are mostly positive and they have expressed a great sense of learning and improved skills of dealing the mental health impact of the pandemic.

Case Study 22 - Ural Federal University, Ekaterinburg (Pop-up book and Augmented Reality for Children with Disabilities)

At the Ural Federal University, a concern identified during the pandemic in the Sverdlovsk region of Russia around the city of Ekaterinburg was the preparation of **children with disabilities** for formal inclusive education, and in parallel increasing the awareness of their parents. Online communication with and the cooperation of parents of children with disabilities, children with disabilities themselves, teachers and specialists has been able to lead to the creation of an **educational pop-up book with augmented reality**, to prepare a child for school using a games-based format, as well as to give new contacts to people across different social groups and ages. The target audience for the School of Inclusive Culture⁴⁷ has been children with various different health disabilities who would find it difficult to be in new places without special training. The logic of this form of intervention is that knowing what the sequence of experiences is likely to be and where they are to go, children (for example, with ASD) will feel more prepared and will adapt more readily to unfamiliar conditions. The website for the initiative argues that:

‘The subject matter of the project is directly related to the current epidemiological situation, the need for parents and children to spend more time with each other. The latter is not always good, because being at home often gives rise to psychological fatigue, which, in turn, is fraught with conflict. At the same time, parents have more opportunities to interact with their children, to teach them new skills’.

Case Study 23 - Southern Federal University, Rostov-on-Don (Psychological discussion club and consultations)

At Rostov-on-Don, the Psychological Service of the Southern Federal University has delivered a number of initiatives support members of its local community to cope with the psychological effects of the pandemic. This has included a **psychological discussion club** “LIFT”, **online psychological consultations** for those psychologically suffering from self-isolation within pandemic and webinars for those from the community interested in psychology. Furthermore, several interviews were offered on **regional radio and television** with employees of the Psychological Service. Among these was an interview with the head of the Psychological Service, E.V. Zinchenko on the radio station "Komsomolskaya Pravda" with the theme: "How to cope with the regime of self-isolation without losses". There have also been publication of interviews and articles by the scientific supervisor of service, A.I. Tashcheva, in the newspaper "Rostov Official" on the theme: “Coronavirus self-isolation fears. A psychologist's advice on how to cope with negative emotions during self-isolation”.

IV. The Private Sector and Foundations

⁴⁷ See <http://vmeste-ano.tilda.ws>

Case Study 24 - Mastercard Foundation⁴⁸

The Mastercard Foundation has been working in partnership with Zain Verjee Group to produce the platform, *COVIDHQ Africa*, within which Africans (mainly youth) are able to document and share their experiences of COVID-19. Story-telling has a strong tradition both in African culture and in the field of adult education, and in this case presents an opportunity for individuals to relate the challenges they are facing as well as providing a space to share how they are 'learning to innovate and practice resilience'. As well as being an informal knowledge exchange space, the platform plays a public health role, and is part of the foundation's overall public awareness campaign, seeking to counter misinformation, and provide access to trusted sources of evidence about the pandemic and vaccination (e.g., its *Vaccine Watch Desk*).

Case Study 25 - Togetherall (Digital Mental Health Support Service)

The lack of social interaction is one serious aspect of the distancing measures, which has resulted in an increase in the problems related to mental health. Educational institutions had to adapt to ongoing restrictions and limit the interactions they had with the students, leaving them even more vulnerable to problems such as struggling to sleep, feeling low, stressed or unable to cope with anxiety. Not every institution has the capacity or trained human resources to offer help in matters related to mental health.

Togetherall⁹ is a UK-based **digital mental health support service** which is available online, 24/7, and is free through partnerships that it has with NHS England, local city authorities, education providers in colleges and universities and the Ministry of Defence. The platform is utilised by 250 organisations globally, and is staffed with clinical experts and are able to case manage individuals at risk. Most often, the support comes from peer-to-peer interaction, but at the same time moderated by trained practitioner.

An example can be found in Scotland, where the City of Glasgow College (a Technical and Vocational Education and Training (TVET) and short-cycle education provider) has a partnership with Togetherall to offer round-the-clock support to their students and staffs.

Components of this partnership involve:

1. Students and staffs have access to 24/7 online global community and support from trained professionals.
2. The platform offered a safe online space for the college community to share their feelings and self-manage their mental health and wellbeing.

The main outcome of this partnership has been the improved health and wellbeing of the college community with most reporting that they feel better and are more able to manage their health and wellbeing. The pattern of use the services also showed the relevance of the 24/7 approach, with 90% of the services being utilised outside the 9-5 period

The case demonstrates that collaboration with a dedicated team, trained to handle the mental health needs with the use of online resources can help reach large target group. The

⁴⁸ See <https://www.covidhqafrika.com>

anonymity which is ensured in reaching peers and other professions can help manage personal health and wellbeing, and also improve learning and professional outcomes.

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