Lessons from the COVID-19 pandemic for lifelong learning

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After more than a year of living with the COVID-19 pandemic, much experience has been accumulated by countries around the world. There have been many failures, and there have been some things that have gone well. Adult learning and education in some form has played a significant role in public health since, without the ongoing continuing educational interventions mainly via the mass media, the number of doctors and hospital beds would likely have been insufficient.

In this paper we focus on the role of group behaviours in relation to the risk of contagion and we argue that any attempts to define a strategy to combat the pandemic must include a strong commitment to information dissemination and to the training of the populations in order to encourage behaviour change necessary to mitigate the spread of the virus.

Against the backdrop of the United Nations Sustainable Development Goals, this article argues for commitment by governments to use adult learning and education as a tool for health prevention and health awareness and to prepare populations for whatever pandemics and national disasters that might emerge in the twenty-first century, the "century of pandemics". We therefore argue that populations must have at least a basic level of literacy and numeracy as foundational skills essential for enabling citizens to receive and act on vital information during a pandemic or disaster in order to engender greater resilienceⁱ.

Keywords: COVID-19; adult education; lifelong learning; health literacy; Sustainable Development Goals; disaster; resilience

Introduction

Two significant global agreements were concluded in 2015, both with a lifespan from 2015 to 2030. The first is the United Nations (2015a) agenda for Sustainable Development with its 17 integrated goals, each of which is linked with a number of sub-goals. The second is the Sendaiⁱⁱ Framework for Disaster Risk Reduction (United Nations 2015b) which is intended to focus on the increasing frequency and intensity of disasters that impede progress towards sustainable development, and which calls for a people-centred "disaster response, rehabilitation and reconstruction, and to use post-disaster recovery and reconstruction to 'Build Back Better'" (United Nations 2015b, p. 7).

This article focuses on the interface of the Sustainable Development Goals (SDGs), disaster management and lifelong learning (LLL), arguing that adult learning and education (ALE) are essential tools in the disaster management toolkit and points to their role in community learning as engendering collective agency and resilience.

The guiding principles in the disaster management framework rely on the participation of communities and also on increasing public education and awareness of disaster risk which in turn rely on the use of existing formal and non-formal education learning to promote a culture of disaster resilience and to generate an understanding of disaster risk, support and mutual learning.

Worldwide, the COVID-19 pandemic has set health services and national economies under stress, resulting in national disruption within a few months. In many westernised countries, such as in Europe (OECD/

European Union, 2020) and the Americas (Blumenthal, Fowler, Abrams, & Collins, 2020), the health services have been driven to deplete human, technological and financial resources with developing countries showing all the fault lines of their fragile health and social infrastructure.

The extent of the pandemic as a social disaster is well documented. Over two million people have officially died of COVID-19, and more than 100 million have been formally diagnosed (https://www.worldometers. info/coronavirus/: Johns Hopkins Coronavirus Resource Center, 2021). Despite not being affected by high COVID-19 incidences (Woyo, 2021), many countries were affected by the impact of the pandemic on the economy resulting from the decrease in world tourist activity arising from the prohibition on sea and air travel (UNWTO, 2020). The rapid and drastic changes brought about by the pandemic touched on all domains of life – family, work, leisure, education – and had an impact on all aspects of societies around the world in unforeseeable ways (James and Thériault, 2020).

Likewise, the world economy was structurally affected by rising unemployment (ILO, 2020), rising public debt (OECD, 2020c), and decreasing GDPs (Cutler & Summers, 2020). Populations saw their financial and earning capacities diminish (OECD, 2020b), and even rich countries saw a reduction in the average life expectancy (Andrasfav & Goldman, 2021); something unprecedented in the last half-century. Over the past year, COVID-19 has exacerbated social inequalities – including, but not limited to, disability, employment status, nationality, income, language, race, gender and social class (James & Thériault, 2020); numerous negative consequences will have an impact on the achievement of all the SDGs, which will leave a mark on humanity for many years (Ottersen & Engebretsen, 2020).

It can be argued that the serious consequences of the impact may be attributed to the unexpected arrival of the pandemic, the unpreparedness of nations, the slowness of their responsiveness and the absence of alternative possibilities. However, we argue that much could have been different.

The current pandemic was predicted as far back as October 2007 (Cheng. Lau, Woo, & Kwok, 2007). The notion of the increasing risk of incursion into epidemics and pandemics had been studied for at least a decade (Bennett & Carney, 2015; Ross, Crowe, Tyndall, & Petersen, 2015; Schuchat, Bell, &

Redd, 2011), and was assumed by the scientific and defence communities (DARPA, 2017; Instituto Español de Estudios Estratégicos, 2020).

It is interesting to note that it was the wealthiest countries that mostly collapsed in the face of the pandemic (Schellekens & Sourrouille, 2020), the result of having invested the bulk of their resources in traditional solutions: believing in the immense responsiveness of their health systems, the ability of science to formulate solutions to new challenges quickly, and the gigantic dimension of their economies and industries.

Almost all of these solutions failed. Even in the biggest financial capitals, health systems collapsed as a result of critical moments of the pandemic (OECD/European Union, 2020) and economies showed hefty falls as not seen for years (Mosser, 2020). With the emphasis on science, the focus on the human subject was lost, ignoring the "attention to the urgent need for each citizen to be equipped to become a health security vector" (Lopes and McKay, 2020a, p. 578). Even if the smallest details of the virus are known (Ortiz-Prado et al., 2020), we still lack knowledge of the human factor and its role in the pandemic. Little attention has been given to the sociological and psychological dimensions of the pandemic and to the twoway relationship between the individual and society which has an impact on health and illness. For a response to a serious threat to the health of a population to be systemic, it needs to be conceptualised as the organic response of a country's entire society and all social institutions in which citizens are active participants (Lopes and McKay, 2020a, 2020b).

The relative disregard for what is human and the sole focus on material resources have placed countless countries on the verge of rupture (Sasangohar, Moats, Mehta, & Peres, 2020). This situation led to political drift and a shift from governance towards populations, a shift which has often been expressed in contradictory guidelines for controlling the pandemic (for example, what happened with masks), and with the invasion of fake news (Van der Linden, Roozenbeek, & Compton, 2020) that perfectly served the goals of some of the most sinister groups on the planet (Van der Linden et al., 2020). Both resulted in the creation of passive and active behavioural resistance of millions of people (Van der Linden et al., 2020).

What failed then? Adult Health Education! It is only by ensuring a healtheducated population that it will be possible for citizens to correctly assess risks in the various contexts in which they find themselves.

The brevity with which ALE could be set in motion and the flexibility of adapting its content, mode of communication and vehicles for delivery make it the single most important state tool and an inherent component of every national emergency strategy, with the capacity to support the evolution of guidelines by health authorities.

Methodological considerations

Although this article is conceptual, it nevertheless uses a "multimethodological" approach – gathering and mixing various sources of data and integrating these to offer a more nuanced understanding of the role of ALE in the context of the pandemic. Creswell & Garrett (2008) point out that research that merges, links or combines sources of data within a single study is able to draw on the strengths of mixed data sources to gain an enriched understanding.

A multi-methodological approach suggests that the variation in data collection methods enables one to answer the research question from a number of perspectives and has the advantage of limiting the gaps which occur specifically when one methodology does not provide all the information required.

In following a mixed-methods research approach in this article, we draw on the data sources as discussed below.

We draw on our practical and research experience through our engagements as the pandemic unfolded, more specifically through the following activities:

- Participation in a study by eight Commonwealth countries (across Africa and Asia) aimed at determining national responses and challenges in the education sector. This comparative study surveyed the responses to the challenges of the pandemic from the vantage point of teachers, parents and officials in Ministries of Education. The study was conducted for the Commonwealth Secretariatiii.
- Presentation of training for mayors and/or their representatives from over 200 cities on determining local needs in knowledge management and health literacy during the pandemic.
- Participation in the area of literacy and health promotion as part of the Senior Board of the European COVID-19 Taskforce for the

Association of Schools of Public Health in the European Region.

- Engagements with national authorities on prevention and public health action in the context of COVID-19.
- Participation in groups on public health governance and extracting lessons for future pandemics.

In addition, the article draws on the content analysis research conducted by Mabunda & McKay (2020) aimed at determining responses to the COVID-19 pandemic in South African education.

Theoretical considerations

The article also draws on theories of health literacy against the backdrop of a life-course model. It focuses on relevant health learning needed across the LLL continuum and specifically as part of ALE within this continuum. The theories of literacy and LLL show how health literacy and literacy are intertwined. Sørensen (2013) shows specifically how health literacy is contingent on what she refers to as "general literacy".

Health literacy is linked to literacy and entails people's knowledge, motivation and competencies to access, understand, appraise, and apply health information in order to make judgements and to make decisions concerning healthcare, disease prevention and health promotion to maintain or improve their quality of life during their life course (Sørensen, 2013, p. 32).

The theories of public health proposed by the World Health Organization (WHO) are all underwritten by literacy competencies. The UNESCO (2010) CONFINTEA VI report resolved that Health Literacy be incorporated into basic education and literacy programmes. This was again ratified in Suon during the CONFINTEA midterm review (UNESCO, 2017). In the specific COVID-19 context, the WHO and the Centre for Disease Control have been making repeated calls for the strengthening of health education and literacy to prepare the citizens to respond appropriately to what is termed "new challenges" of denialism through fake news. The ability to read and to critically reflect on the news is a necessary skill to enhance the ability of citizens to engage with health messages.

Health literacy offers many benefits for improving understandings of health. In this sense, literacy in general and health literacy specifically can

be seen as being akin to Bourdieu's (1986) notion of cultural capital which improves people's access to health information and their ability to use it effectively. This form of social capital is critical to mitigating COVID-19. Originally, Bourdieu (1986) used the concept of cultural capital to explain the unequal academic achievement of children from different socioeconomic backgrounds and children who have the cultural capitaliv and who are therefore better endowed to excel in the education system (in a more deterministic sense). Abel (2008) acknowledges that class-related cultural resources interact with economic and social capital in structuring people's health chances and choices. In this regard, cultural, social and economic resources translate social disadvantage into poor health. When applying this to health outcomes, we argue that health literacy endows a "cultural capital" that might improve health outcomes. We thus argue that the introduction of ALE in a life-stage approach could transmit the "cultural capital" to mitigate poor health outcomes.

Understanding the pandemic

It is essential to understand that a pandemic due to respiratory transmission is essentially a social manifestation insofar as contagion from A to B only occurs if A and B have some degree of social interaction. Even if we contracted the worst infectious diseases but were isolated, we would not be able to transmit them.

The foregoing condition was first studied in cereal fields in the 1950s. One cob only transmitted a disease to another if it was close enough under adequate conditions. This knowledge is now universally accepted as the fundamental foundation of the "epidemiological triad" in all epidemiology handbooks.

This triad consists of the infectious agent, the host and the environment in which it occurs. In the COVID-19 pandemic, the triad is represented by SARS-CoV-2 (Hu, Guo, Zhou, & Shi, 2020), the population and close social relationships.

Effecting control in a pandemic relies on eliminating the agent (in the environment) or if the host is acted on (for example by vaccination) or by interfering with the agent's mechanisms of propagation in the ecosystem where it is found, making its diffusion difficult through the use of masks, physical distance, and repeated hand washing, among other things.

While this is seemingly simple, how is it that over 100 million people could be affected? (The official statistics are certainly below the real value?) Had societal responses been prepared at community and individual levels the outcomes would have been very different from what has been recorded by countries across the globe. And while it may be argued that the unexpectedness of the pandemic made it impossible to have coordinated national and international responses, it may be argued analogously that people learned to drive while minimising accidents by creating a road traffic code; they were able to work in relative safety, with the development of health and safety regulations, and to use the Internet with some security through the development of protection mechanisms. Clearly, for each global risk, humanity has had a tendency to develop preventive mitigation strategies against physical and economic damage.

In this line of tradition, we could (and should) as a society have learned in a timely manner to deal adequately with health risks (Košir & Sørensen, 2020; Lopes and McKay, 2020 a,b).

One of the few certainties in life is that we all end up getting sick and dying. Therefore, health education and health literacy should be clearly conceptualised, using a life-stage model that considers the stages in life with various health challenges and, in contexts of epidemics and pandemics, the way in which citizens need to respond to harness their collective resilience. This form of learning would need to be structured across the education system and more especially across the LLL continuum. This includes the post-school and ALE systems, aiming at the individual and collective and ensuring a state of readiness for chronic and acute situations, such as epidemics.

All people should be able to defend themselves with precautionary measures at the first sign of an epidemic outbreak. This requires that individuals have adequate knowledge to enable an effective response to limit the progression from an epidemic to a pandemic. For example, the early compliance with the protocols provided by public health authorities can extinguish the outbreak of an epidemic at the initial stage. Once again, it seems like a simple idea, particularly because the countries most affected were those where the average level of education is among the highest (OECD, 2020a).

Unfortunately, the divergence has been evidenced between theoretical probability (people being able to understand and react to simple

behavioural changes, considering their immediate benefit) and the progression of the pandemic. It was precisely the wealthiest countries, with more education and other resources which registered the worst COVID-19 incidence and mortality rates (Schellekens & Sourrouille, 2020). These countries have older populations; in the current pandemic, the age factor is crucial in the hospitalisation and mortality rates (Goldstein & Lee, 2020; Hoffmann & Wolf, 2020).

Knowledge and well-being

Part of the issue about the populations' inability to have adequate knowledge to deal with the new pandemic problem lies in the almost total dependence of the educational systems on what is learned in the childhood and adolescence phases and its separation from an "education-for-health" knowledge. Without the habit of permanently renewing and updating knowledge according to the assumed health responsibilities, it becomes challenging to quickly integrate new knowledge and even more difficult to transform it into behaviour. Without knowledge, it is less likely that citizens will have the agency to act in ways appropriate for mitigating the spread of the virus and we argue that the lack of health literacy is one of the greatest global health threats. The absence of programmes for health literacy may be partially attributed to the budget for ALE and other non-formal programmes needed for updating knowledge (OECD, 2020d).

The foregoing inability had its counterpart in the vast number of denialists, even among those with higher education (Miller, 2020), and some linked to the health sector (Hoffmann & Wolf, 2020). Instead of defending themselves and those who depend on them, these individuals denied the obvious information and built alternative realities (Miller, 2020). Others less intense in their denialism simply exhibit passive opposition behaviours, which have led to the strengthening of political denialist movements. This resulted in open spaces that were mostly used for the generation of fake news that proliferated into the alternative reality that citizens had to decode (Piller et al., 2020).

Clearly, there was an inability by the health authorities in almost all countries to inform, educate and communicate appropriately with citizens. In countries with more than one official language, there was the problem of multilingual information transmission.

The need for health literacy to at least be able to quickly deconstruct the most obvious information and to receive information that protects from disinformation was urgent in this pandemic and was clearly shown in countries with low levels of literacy, fragile health, and poor health communication systems.

Increasing digitisation in the digital divide

Another sphere of life deeply touched by the COVID-19 pandemic was the need for teleworking, by countless governments during lockdown times (Manokha, 2020). Within months, the digitisation process progressed with a rapidity that was unthinkable in a normal situation. The pressure for digital work provided a catalyst for the digital transition, for Society 4.0. Notwithstanding this, the digital divide also meant additional barriers to learning, bringing about stress and anxiety as the education sector digitally upskilled, and leaving those on the wrong side of the digital divide without education and work. The digital divide is essentially a socio-economic divide, which was exacerbated by the pandemic.

James and Thériault (2020) also refer to the ways in which the COVID-19 pandemic brought about rapid and drastic changes that, they state, have shaken all aspects of societies around the world impacting on all domains of life: family, work, leisure, education and exposing the societal inequalities. They point out that the inequalities have also deeply affected access to, and participation in, LLL education across the continuum with disadvantaged people having little or no access to equipment or connectivity to engage online with digital learning at a time at which education and ALE are critical.

The pandemic and social vulnerability

As happens in pandemics, the issue was that the most vulnerable groups are always the most sacrificed (ASPHER, 2020). The greater the degree of vulnerability:

- the greater the impact of the pandemic (Greenaway, Hargreaves, Barkati, Coyle, Gobbi, Veizis, & Douglas, 2020);
- the greater the exposition to job loss (Santos, De Cássia Pereira Fernandes, De Almeida, Miranda, Mise, & De Lima, 2021); and

· the less one understands the instructions about hygiene and protection (Paakkari & Okan, 2020).

The situation is exacerbated by the additional issue of linguistic understanding for migrant groups and refugees (Kluge, Jakab, Bartovic, D'Anna, & Severoni, 2020).

For all these reasons, pandemics are real machines for deepening social vulnerability, while the most privileged groups have the advantages of lower levels of contagion (Sasangohar et al., 2020), increased wealth (Davis-Faulkner & Sneiderman, 2020), and socio-economic and healthcare advantages (Berkhout, Galasso, Lawson, Morales, Taneja, & Pimentel, 2021).

The infection rates seem to be higher among economically disadvantaged people as a result of the less favourable and often cramped living conditions (Waller, Hodge, Holford, Milana, & Webb. 2020).

Another consideration is that to be defined as an epidemic or pandemic, the following criteria must be met:

- There is a communicable disease for which there is no immune response.
- People can carry the disease from one place to another.
- Infectious agents can be deposited on surfaces that are moved from one location to another.
- There are ecosystem conditions for the aggression agent to survive the arrival to a new location.

As for the first condition, each individual in each zone of the planet has an immunological profile more or less adapted to its place of residence. An example of this is when Europeans arrived in the Americas, they spread diseases (Sciencemag, 2015) such as flu and syphilis to which local populations had no resistance, thus causing genocide.

The second condition, the exponential growth, occurs as an increasing number of people travel to more distant places, more often (Tuite, Bhatia, Moineddin, Bogoch, Watts, & Khan, 2020). Tourism and the globalisation of business move billions of people each year, making it possible for an epidemic outbreak to spread from one continent to

another in a matter of days (Emergency Operation Center, 2020). The rapid spread of COVID-19 can be contrasted with the worst pandemic described in history, the Black Death, which took four years to transmit from Asia to Europe (Cesana, Benedictow, & Bianucci, 2017).

The third condition relates to globalisation. Never before has human consumption been so globalised, which allows for an infectious agent to spread within days or weeks across the planet, the necessary time for the cargo logistics (Hanson & Nicholls, 2020). The only requirement is for the agent to survive the transport conditions and to find a place on arrival with an ecosystem to thrive.

Finally, climate change in itself is a huge menace to human health and the animals that accompany humans. Many pathogens need a specific ecosystem to live, with the potential to prosper for decades or centuries, even if there is no contact with humans or animals (Almond et al., 2020).

Climate change, the associated deforestation, the consumption of wild animals, and other contacts with wild areas place humans and the animals that accompany them in much greater contact with microorganisms previously stabilised.

Another consequence of climate change is that it allows microorganisms to survive outside their traditional zones, which has already happened with many different diseases such as Rift Valley fever (Nielsen et al., 2020), the chikungunya virus (Gossner et al., 2020), and dengue fever (Salami, Capinha, Do Rosário Oliveira Martins, & Sousa, 2020).

Finally, global warming will soon pose challenges that are at this moment still unknown. For example, parts of the tundra (the largest ecosystem on the planet) will melt (Feng et al., 2020) and bring microorganisms that have been frozen for millennia into contact with humans that might have or might not have immunisation (Goudarzi, 2016).

Once all genesis conditions are met for the spread of epidemics and pandemics, these contexts will likely return with greater frequency and severity than until now. There have been four pandemic declarations in this century (Da Costa, Moreli, & Saivish, 2020); an average of one every five years, the current one with centurial expression. Keeping this pace, there would be 15 or 16 more pandemics by the end of the twenty-first century, some with a severe manifestation for the world population.

Learning through the pandemic

What lessons are there to be learned from the global experience? From the educational point of view, the framework described above expresses the essentialness of education to play a central role in the toolkit for all disaster management programmes. The pandemic has shown that despite the guidelines of the Sendai Framework for Disaster Risk Reduction (United Nations 2015b) disaster management plans on the ground were thin and that virtually no people-centred preventive approaches were readily available both for dealing with the challenges of the pandemic or for "Building Back Better" that requires a focus on the collective human response.

The unfolding of the pandemic has had an impact on the entirety of the United Nations (2015a) agenda for Sustainable Development across its 17 indivisible goals, more especially Goals 3 and 4.

The interface of the SDGs and disaster management conjoins SDGs 3 and 4, and we argue, the LLL approach with ALE must be an essential component of the disaster management toolkit (Lopes & McKay 2020) as a means of engendering collective agency and resilience, including the use of ALE to promote a culture of disaster resilience, support and mutual learning.

We have argued elsewhere (Lopes and McKay, 2020a, 2020b) that the importance of ALE is central to risk preparation. We argue for basic training throughout life stages to enabling health knowledge and preventative behaviours of infectious diseases. LLL is essential for this to happen because health literacy requires updated content that can make real contributions to the various social groups by age, gender, vulnerability, education and learning in the context of a pandemic or in the context of any other disaster that may transpire. We admit that there may be other dimensions that have to be integrated into the solution in addition to the elements mentioned above but we nevertheless argue that ALE as part of the LLL has the immense possibility and flexibility of being able to adapt its content to the enormous differences in message and form that society requires.

Williamson, Eynon & Potter (2020) point out that emergency preparedness as a form of public pedagogy is needed. They refer to the way in which a wide range of materials can be used in public preparedness for emergencies including leaflets and public information films, interactive websites, audio and video materials, and family and community learning activities. Materials need to be both lifelong (aimed at all ages, from young people to older citizens) and life-wide pedagogies (aimed at communities, businesses and the public sector) which can be conceived to be part of LLL (being socio-culturally embedded).

English & Mayo (2019) refer to the importance of dedicated education programmes, including ALE in contexts of disaster, advocating broader access to quality learning for disadvantaged people or those at risk such as those with low or no levels of literacy and numeracy, ethnic minorities, indigenous groups, individuals with disabilities, prisoners, older people, people affected by conflict or disasters, migrants, refugees, and stateless or displaced persons. In this way, they show a concern that LLL opportunities for all reach those who are "unreached" or let down by formal education systems.

Similarly, Wilson, Osborne & Guevara (2018, p. 300) advocate LLL as essential to the achievement of the SDGs, pointing to the important role of affiliative or collective learning which relies on mobilising people around development challenges. They underscore the role that adult education, particularly in developing contexts, offers to supportive networks of solidarity and community when building resilience to tackle the challenges that individuals and collectives face. Research published elsewhere (Lopes & Romm, 2007, 2008) refers to the critical need for basic literacy skills as a precursor to health literacy. The studies conducted by these authors on behalf of the International Labour Organisation (ILO) aimed to determine the knowledge, attitudes. perceptions and behaviour of high-risk populations in relation to HIV/ AIDS. They found a high correlation between those people with low levels of information on HIV/AIDS or health education and those with low levels of literacy; the risk was enhanced among refugees and internally displaced people, and mobile populations whose living circumstances made them particularly vulnerable to HIV/AIDS (Lopes and McKay, 2020a,b).

We argue elsewhere that social capital through support networks afforded by ALE is recognised (particular in African culture) as being critical for strengthening the social infrastructure at a community level and is essential for offering reciprocal support during social disasters,

providing a means of coping and navigating crises. During the pandemic. the "reciprocal communalism" was replaced by the rapid expansion of communication channels, with interaction via the media thus excluding those who lacked the digital means (Lopes and McKay, 2020b).

Agency and resilience in the face of disaster

James and Thériault (2020) refer to the importance of learning and actioning together as a "resource of hope". We argue for ALE within an LLL paradigm which offers one "such resource of hope" particular when countries face disasters such as the COVID-19 pandemic and contend that basic and health literacy and health knowledge are essential for disaster management and for strengthening community resilience in order to deal with disasters that might face the world population. Community-based learning has an added dimension insofar as it enables the development of essential "networks of resilience". Communal learning groups have shown to engender trustful and mutually supporting relationships alongside the development of the "hard" skills of content, contextual and practical competencies that can be applied to the social contexts in which people find themselves (Fullick, 2009; Author 2, 2018). Communal collectives provide the basis for the development of agency and resilience by enabling communities and social collectives to gain control over decisions and resources that determine their quality of life and catalyse human agency to collectively tackle the many associated problems.

The development of social capital and community connectedness builds pockets of resilience needed to enable individuals and communities to deal with the negative pressures that have an impact on them (Aldrich & Meyer, 2014, p. 2) and to successfully cope with and navigate around or through crises that have an impact on their health and well-being. Fullick (2009, p. 35) points out that "people in poverty need learning that supports all aspects of their lives and develop capital that enhances personal identity and social solidarity as well as human capital."

Following on from this, McKay (2018, 2020) shows the way in which collective learning contributed to the general humanness and ubuntu^v of people in poverty.

She refers to learners who participated in the South African Literacy Campaign who, beyond the classroom, worked together to achieve

communal goals such as establishing communal vegetable gardens or helping a neighbour who was ill. Their working together through the pandemic, as the enactment of ubuntu, gave rise to the servicedriven activities, reducing isolation and supporting their networks and solidarity, sharing food and providing socio-psycho support to those with health or other issues.

James & Thériault (2020, p. 129–131) in fact celebrate the strength and resilience of the adult education sector in the face of COVID-19 pointing out that during this time of crisis, ALE had been invaluable for the socioeconomic well-being of communities, providing critical foundational components for dealing with challenges that persist among the hardest people to reach. They argue that ALE can contribute to equipping citizens with life skills that are critical to their health and well-being more especially at times like this when citizens had to rapidly learn a new language essential to self and communal protection.

Lopes and McKay (2020b) further refer to the "new language" requirements emanating from COVID-19 stating that in addition to understanding the complex disaster management requirements for the various levels of the pandemic, citizens had to learn about viruses, social distancing, flattening the curve, immunity, vaccinations and of late the new COVID-19 variants. This learning has relied on multimodal communication which would have been more effective if populations had received even the least amount of education and health literacy.

Following Nutbeam (1998), Grey & Coughlan (2009) consider health literacy as comprising both cognitive and social skills, arguing that these underlie motivation and ability of individuals to comprehend and respond appropriately in terms of their individual and their communal well-being. They refer to the following foundational domains of a health literate person:

- fundamental reading, writing, speaking and numeracy;
- fundamental comprehension of scientific concepts;
- civic awareness of public issues in order to become engaged; and
- the cultural ability to understand and use the collective to interpret and act on information.

Much of the information has been communicated via social media which has been a prominent tool during the pandemic. Its use has ranged from

disseminating health information to the organisation of "demonstrations and protests at a moment's notice through to offering mutual aid and practical support at individual, community, and organisational level" (Campbell, 2020) as well as for disseminating misinformation and fake news.

Learning, social justice and the pandemic

Lastly, this article draws attention to what English & Mayo (2020) refer to as the social justice dimension that is starkly revealed by the pandemic. The socio-economic fault-lines in the global South have been glaring, with food security being at crisis level. Turok and Visage (2021:130) point out that the main focus of the COVID-19 emergency planning in South Africa (and much of the world) was on readving the health care sector with less focus on the economy. As a result, poor communities have borne more of the burden due to their "precarious livelihoods, fewer resources to withstand shocks, and their neighbourhoods are likely to have weaker social infrastructure and safety nets" with households unable to buy food (2021, p. 131).

While much needs to be done to redress these challenges at a political level, we argue that ALE can serve as a platform for those who fall through the socio-economic cracks by providing knowledge, supportive learning networks and solidarity. This article calls for role players in the health and education sectors in pursuit of SDGs 3 and 4 to recalibrate their roles to become involved in providing health literacy within their own learning communities. Indeed, during this time of crisis all who have access to constituencies, whether through trades unions or political parties and across the education sector, are called upon to hone their disaster management mandate, and to reach out to those people who are marginalised and socially isolated.

Torres (2004, p. 22) sums up the many ways in which adult basic learning can be used to have an impact on personal and communal development especially at times of crises. She states that it improves the quality of life of people by

giving hope, dignity, self-esteem, empowerment, enhanced selfexpression and communication skills, positive attitudes, a sense of the future, better overall objective and subjective conditions for livelihoods and for improving the quality of their lives, and

 enhancing community and civic participation with adult learners increasing their concern about social, environmental and health issues, and citizenship.

ALE is thus regarded as a public good that is catalytic in improving the quality of life.

Conclusion

Therefore, five lessons can be drawn for the future:

- Epidemics and, more broadly, pandemics have been part of
 the human path since the primordial times. Despite all the
 developments, both contexts will continue to follow and, will surely
 be part of the future of the human being and its accompanying
 animals: food production, and company, among other things. For
 this reason, they are infrastructural phenomena and endogenous
 to the human being, which should be reflected in the processes of
 learning and citizenship.
- 2. As the basis for the spread of pandemics is essentially a social phenomenon of knowledge and behaviour management, populations should have access to health education since its genesis, in the broadest sense of the word, can be transversal to the various epidemic threats.
 - a. Such education should be broad, LLL, from the beginning of schooling, and follow the citizens' life stages according to their skills and responsibilities.
 - b. Such learning should include the ways to care for oneself regarding specific risks one incurs and one's learning of health responsibility towards other people. Education should have a strong focus on adulthood with care for others, in particular children, young people, and older people.
 - c. In the COVID pandemic, this is one of the points that has failed the most and therefore needs urgent correction, regardless of more structured and sophisticated actions later, so that the systematic irresponsibility of high-risk behaviours for oneself and the community is not verified again.
 - 3. The ALE and LLL system must have prior preparation of content

and support infrastructure so that, before each particular threat, the production of specific and efficient formative and informative content is generated (measured by the degree of understanding and adherence of the populations).

- 4. There should be a communication axis for each social group, emphasising the degree of vulnerability of the target group. Therefore, it is necessary to produce specific training content by social group and education level by providing an ALE approach that encompasses all these characteristics.
- 5. The digital literacy effort should be greatly increased to include those who have now been most sacrificed by digitalisation in the current pandemic: health workers who are not digitally prepared, people who are not equipped with computer material, older people, and individuals in vulnerable groups. For these individuals, ALE actions have to be developed in the event of a new pandemic.

The approach to improving preparedness for disaster responsiveness, rehabilitation, reconstruction and "Building Back Better" relies on the interface of the SDGs, disaster management, LLL and engendering collective agency and resilience. It is necessary that ALE be regarded as a public good that is catalytic in improving the quality of life.

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Resilience is defined as "The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions" by the UNDRR (2009).]

ii The Sendai Framework for Disaster Risk Reduction 2015–2030 was adopted at the third UN World Conference in Sendai, Japan, on 18 March 2015.]

- iii The study was undertaken on behalf of the Commonwealth Secretariat to examine the impact of COVID-19 on education systems. This research also forms part of the #OpenUpThinking Research Bootcamp which aims, through the establishment of cross-cutting partnerships, to benefit the broad education community by feeding the emerging findings from the thematic streams into the relevant debates and the Commonwealth Ministers of Education Conference in 2021. The research was aimed at providing real-time inputs education processes. The second author was the theme leader specifically in Kenya, India, Sri Lanka, Nigeria, Tanzania and Zambia. Mabunda and McKay (2020) focused specifically on the impact of the pandemic on South African education.
- iv It is recognised that the cultural reproduction theory has been challenged by resistance theories and theories of voluntarism (Claussen & Osborne, 2013). However, we refer to cultural capital in this article as constituting essential health knowledge, attitudes, perceptions and behaviour that are necessary to mitigate health and pandemic risks.
- v Letseka (2016, p. 113) mentions the African philosophy of ubuntu as referring to a communal interdependence and of being rooted in one's community. It implies an interactive ethic "in which humanity is shaped by our interaction with others, as co-dependent beings, offering key values of group solidarity, compassion, respect and human dignity". As a philosophy, ubuntu privileges "we relationships" in contrast to Western individualism, hence the assumption "I am because we are; we are because I am" suggesting a constructivist ontology in which a person's sense of being cannot be detached from the social context. Ubuntu stresses reciprocity and collectivism. It expresses the values of collaboration, cooperation and community guided by the ethos of care and respect for others and the importance of solidarity in the face of adversity (cf. Mabunda & McKay, 2021).

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