BCES Conference Books, 2021, Volume 19. Sofia: Bulgarian Comparative Education Society
ISSN 2534-8426 (online), ISBN 978-619-7326-11-6 (online)

JP Rossouw

The Implications of Physical Distancing during Covid-19 for Education Researchers

Abstract

Physical distancing, isolation and an absence of face-to-face meetings with participants and respondents, as ramifications of the current Covid-19 pandemic, have an adverse effect on research projects, research processes and data generation. Furthermore, researchers' professional development and career prospects are seriously hampered, most notably those of early career academics. These predicaments considerably outweigh the admitted positive effects of the pandemic on research endeavours. The literature sources consulted were published in 2020 and 2021. This paper therefore can merely claim to reflect an early 2021 cross-cut of the rapidly developing pandemic and its influence on higher education, and specifically research. This paper represents a scenario where the focus has shifted from the 2020 lockdowns and travel restrictions to the 2021 vaccination period. It explores the implications of physical distancing – the relative absence of unhindered personal contact – in the sphere of research in general, and especially research in education contexts. A literature survey generated several insights from scholars worldwide, while personal experience also forms part of the discussion.
As indicated by the literature, researchers have to make the most of the current virtual communication during data generation, conferences and interaction with colleagues and fellow project participants. I trust that vaccination will soon ensure that physical distancing will become unnecessary during research and on the campus.

Keywords: physical distancing, social distancing, isolation, professional development, data generation, virtual contact, technology usage

Introduction

Offord (2020) cites social neuroscientist Stephanie Cacioppo who stated: "We're a social species", she says "We really need others to survive". The isolation and physical distancing associated with Covid-19 is a well-known phenomenon and most people experience it as the new normal (Nutten, 2021). In the process many people adopted coping strategies and embarked on alternative ways of communication. In the period of time since most countries went into a hard lockdown, it became clear that the pandemic has led to a large number of negative consequences. The adaptability of humankind has been tested like seldom before, and not everyone has coped equally well with the new challenges.

In the context of research and the lives of researchers in higher education, very specific new challenges had to be dealt with. In both the natural sciences and humanities considerable adaptations had to be implemented just to proceed with planned research activities. Through the threat of being infected with the virus, the first semester of 2020 marked the start of a sudden, unexpected abandonment of all

direct, unrestricted personal contact. “The social distancing norms were particularly disruptive and made the experience unique” (Sikali, 2020, p. 2435).

Types of contact that were the order of the day in the previous dispensation, were instantly barred and forbidden. Most academics were forced to switch to a virtual style of communication in both social and formal contexts. Closed campuses and a working-from-home life became the norm. Schiffer and Walsh (2020, para 1) pointed out that “… the impact of social distancing on the actual process of research has not been carefully evaluated or even broadly acknowledged”. The real effect of the lack of personal, face-to-face contact is yet to be determined, but from my point of view there are already clear indications that no online, telephonic or other kind of virtual communication can fully compensate for the absence of personal contact. Admittedly, the pandemic also brought about a number of advantages and new opportunities.

This paper explores the implications of physical distancing – the relative absence of unhindered personal contact – in the sphere of research in general, and especially research in education contexts. A literature survey generated several insights from scholars worldwide, while personal experience also forms part of the discussion that follows. It should be noted right from the outset that most statements, perceptions and research related to the pandemic and its influence on people’s lives is outdated the very next day after it has been written. Similar to the literature sources that were consulted, published in 2020 and 2021, this paper therefore can merely claim to reflect an early 2021 cross-cut of the rapidly developing pandemic and its influence on higher education, and specifically research. The literature review this paper is based on represents a scenario where the focus has shifted from the 2020 lockdowns and travel restrictions to the 2021 vaccination period. Despite all measures put in place, the future for all countries and people stays vague and uncertain.

The well-established term, social distancing, is a somewhat misleading and even unfortunate choice of words. The term physical distancing could have been better. The underlying principle is to keep a safe distance from others, normally 1,5 m, in social or public surroundings. “The measures may involve closing partially or wholly social activities including business, transport, among others that may enhance social contact and propagate spread” (Musinguzi & Asamoah, 2020, p. 2). The World Health Organisation (WHO) in partnership with the United Nations Children’s Fund (UNICEF) warned against a possible misunderstanding:

> *… the term social distancing has created some misunderstandings as some people mistakenly believe that the term social distancing means, changing your relationship status with people or that we need to be separated from family and friends. Due to this misconception, the WHO have begun to use the term “physical distancing”.* (UNICEF, 2020; Musinguzi & Asamoah, 2020, p. 2)

In this paper, the term physical distancing refers firstly to distancing between people that are in each other’s presence, which makes a face-to-face conversation possible, while adhering to regulations that specify a distance of no less than 1,5 m. However, physical distancing in this paper primarily refers to researchers being physically isolated from both fellow researchers and participants in their studies. Campuses are semi-closed, and academics are encouraged to work from home, an approach which in many contexts has become the norm and prevents the majority

from face-to-face contact with colleagues. Strict safety measures implemented at schools, bar or discourage education researchers from entering the premises and conduct interviews with educators or other possible participants.

Implications of physical distancing for research projects and data generation

Within the higher education context, the impact of physical distancing on research is also valid in the teaching and learning context. Most higher education institutions have switched to exclusively online teaching, or a hybrid model with limited personal contact parallel to online teaching. To most academics and students online teaching is nothing new, as is virtual contact with participants and respondents in research activities, for the purpose of data generation. The most notable difference associated with the pandemic is that personal, face-to-face contact has become loaded with risks of possible infection by the virus.

A number of implications for research projects, data generation and research ethics will next be discussed, after which the focus will switch to the implications of physical distancing for researchers.

Livingstone-Peters (2020, para 23) warned that important research questions that deserve scientific scrutiny "cannot simply disappear just because we have a Coronavirus pandemic at this current moment". Key research questions obviously do not only refer to matters associated with the pandemic, but also to burning issues that existed prior to Covid-19. Livingstone-Peters (2020, para 23) added that researchers have to be pandemic prepared and adapt their methods and approaches on a permanent basis. These scholars foresee further similar disruptions, even new pandemics, that will hit society.

Despite certain evident disadvantages, a virtual or online approach (at least on technological level) does not create serious problems in First World contexts, where internet connections are stable and fast, cell phone connections are constantly available, and the vast majority of people are computer literate. In contexts where this is not the case, as in remote areas and Third World countries, the challenges for both teaching and research are much more prevalent and influential. As Prata-Linhares et al. (2020, p. 1) stated, the pandemic offer

> *[an] enlarged reproduction of pre-existing educational asymmetries. People who live in a situation of social vulnerability and digital exclusion are facing many more difficulties in the isolation period, as well as in managing to keep learning, than those in better financial conditions and with broadband internet access.*

The challenges associated with often failing technological connections adversely influence both researchers and potential participants or respondents. On his ResearchGate blog, Marinkovic (2020) gave researchers the opportunity to reflect on the impact of the pandemic on their academic and research activities. One Namibian researcher, working amongst indigenous people in terms of education, reported that participants' lack of access to technology hampered the inquiry significantly. Marinkovic (2020, para 5) adds: "Although one could successfully complete a series of interviews, the nuances that are often evident in face-to-face meetings go amiss when communication technology is utilised".

In contrast to abovementioned technological challenges of Third World contexts, Jørgensen and Claeys-Kulik (2021) focused on First World countries and describe the expected changes and a redefinition of priorities of European universities. They envisage that these universities' nature and structure will be "hybrid, combining physical and virtual spaces in a holistic learning and research environment that accommodates the needs of a diverse university community" (Jørgensen & Claeys-Kulik, 2021, para 7). In First World contexts, researchers meet the challenge to not being allowed to conduct face-to-face interviews "by learning new tools and digitalizing the data collection process" (International Science Council, 2021, para 5). In the absence of reliable technological contact between researchers and participants, as is experienced in most Third World contexts, no empirical research can take place. Alternatively, data will be generated by means of personal contact while adhering to the standard Covid-19 preventative rules such as physical distancing, sanitising and wearing of masks. This is only possible where such access is approved by rightfully cautious authorities.

All rural areas and all less affluent communities are not necessarily devoid from internet access. Ganesan (2021) describes the positive effects of one successful project in rural India. The AirJaldi project, in collaboration with the Microsoft Airband Initiative, established fast, reliable broadband internet access to the people in rural India. The inhabitants of the remote village called Churni previously had extremely unreliable Internet, but could recently break out of their relative isolation, and can now (through the involvement of a services centre) connect with government officials, higher education institutions and researchers. Still, "only half of India's 1,35 billion people have reliable Internet access" (Ganesan, 2021).

Above scenario might be an indication of the general situation in most poor, Third World communities. Firstly, there are those relatively few areas where the internet is available, stable and fast, but only located in certain reachable offices, and not in peoples' homes. Livingstone-Peters (2020, para 15), reporting on the African situation, pointed out that "Zoom and Skype meetings are a luxury – something that many households in these regions do not have and cannot afford". Secondly, areas exist where internet is available in special offices, however, it is not reliable. Lastly, there are vast areas where no internet exists. Typical to all three scenarios mentioned above is the fact that very few people in such circumstances have developed the necessary computer skills to participate in on-line data collection. An important requirement in empirical research that is hard to meet, is that of confidentiality during data generation. A computer literate facilitator has to become involved, and especially in a village context it can be expected that all responses might not convey the honest opinion of a participant.

Cell-phone networks are widespread, and its affordability ensures that people with low incomes can also be reached, even in remote areas. Cell phone contact ensures a much more viable option for virtual contact between researchers and participants. One participant on the blog, Xenny Brown, (Marinkovic, 2020, para 5) encourages cell phone contact, "which have been a boon to those who need to speak to multiple participants". Through use of cell phones researchers can break through the connectivity barrier, avoid the risks associated with the pandemic, and make the voices of marginalised individuals and groups heard. Creative ways will have to be developed to ensure connections, even where participants have outdated handsets on

which applications that are taken for granted in First World contexts are not practicable.

The use of cell phones is a viable solution of breaking through isolation and counter the absence of face-to-face contact. It is, however, regularly experienced that text messaging "cannot accurately convey tone, emotion, facial expressions, gestures, body language, eye contact, oral speech, or face-to-face conversation" (Anon, 2021, para 4). In social contexts, messages often get misinterpreted or misunderstood. In the research context, where accurate data, reliable findings and trustworthy conclusions are essential for quality research, a negative ramification of cell phone communication with participants is that data integrity cannot be ensured.

Implications of physical distancing for researchers

In February 2021 about 1,5 million people in South Africa have tested positive for the Coronavirus, and the death toll is approaching 50,000. Worldwide 2,4 million people have already lost their lives since the start of the pandemic. The physical danger associated with the spread of the virus is therefore obvious, and all researchers who consider it necessary to get into closer physical contact with participants, run a high risk of being infected.

In their research about the impact of physical distancing on the process and outcomes of research, Schiffer and Walsh (2020, para 1) refer to

> *a new mode of research, one in which masks and strict social distancing are mandatory. Naturally, the challenges for researchers who are touched directly by the disease and those with significant health risks can also be especially difficult, and many others are feeling the impact on their mental health.*

The human, social element associated with personal contact has been an integral characteristic especially of qualitative research, mostly during face-to-face interviews. Schiffer and Walsh (2020, para 3) describe research in higher education, and specifically in the fields of Science, Technology, Engineering and Mathematics (STEM) as "almost always a collaborative social process". They add that, when physical distancing has to be maintained, the essential collaboration "is being shaken to its very core". In cases where researchers amongst themselves, or researchers in interaction with their participants or respondents, have to maintain such a distancing to prevent health risks, there are several clear implications for researchers, as will be discussed.

Planned discussions as well as impromptu meetings with colleagues on campus currently do not happen, except in rare cases. Working from home can be seen as an isolating factor, with several detrimental effects such as limited intellectual stimulation, "suppressing the serendipitous formation of collaborative ideas" (Schiffer & Walsh, 2020, para 8). Hindered peer group interaction and development of relationships that can have a damaging impact on the quantity and quality of research outcomes. As reported by Marinkovic (2020, para 5), one female researcher on a ResearchGate blog points out that "responsibilities at home is reducing the productivity of the work". On the positive side, another scholar on the Marinkovic blog, who does not spend time on transport to campus any more, states that working from home "has provided me with a little more flexibility to do my job, while maybe saving me a little time that I can direct at doing research". He even admits that he can "do various work tasks in remote meetings" (Marinkovic, 2020, para 6).

Virtual conferences have become the order of the day and in the absence of personal contact, certain valuable sequels of such meetings are currently lost, mainly related to the non-formal element of such gatherings of scholars. No online conference can compensate for those valuable interactions between sessions, where networking can take place and where further collaboration is contemplated. Such interactions provide a space to conceptualize highly productive projects.

Referring to the Leading Integrated Research for Agenda 2030 in Africa (LIRA) programme in Sub-Saharan Africa, Livingstone-Peters (2020) points out some implications of the pandemic for early career researchers in this program. Currently, one prominent drawback is the relative lack of funding for research projects within the LIRA programme. One LIRA grantee hopes to find funding for continued research after completion of the current project (Livingstone-Peters, 2020, para 10), "but is concerned about funding cuts as we move into the post-pandemic phase".

Having to resort to virtual conferences, young researchers miss opportunities of meeting established scholars in their fields, and the so much-needed professional networking is limited (Schiffer & Walsh, 2020, para 4). Researchers have to cope with a phase in their professional careers where mobility is severely restricted. Livingstone-Peters (2020, para 11) voices the concern of young scholars who are not considered for lecturing positions or promotion to other universities, due to the pandemic related decline in the economy.

There are positive ramifications and new opportunities for researchers. Several scholars point out certain advantages associated with the pandemic. Looking at the implications of the pandemic from a German perspective, Gardner (2021) puts the current situation as follows:

> *To mitigate the impacts of the coronavirus crisis in this area, the CSH calls for new tools to maintain and promote international cooperation which maintain a balance between physical and virtual exchange.*

Referring to Germany's Council of Science and Humanities or CSH (Wissenschaftsrat), which has published a policy paper regarding the country's higher education and research system, Gardner (2021) pointed at the fact that certain flaws existed prior to the pandemic. This includes, in the field of medicine, the slow translation of health research results into advancement of healthcare. Other deficiencies identified by the CSH are the "need for more cooperation within the European Union" (Gardner, 2021, paras 11-13), and weaknesses in communication regarding scientific findings between scientists and the public at large. Gardner (2021, para 2) therefore regards the pandemic, that has "shaken many certainties", as an opportunity for a "fundamental resetting of the higher education and research system".

One observation of a change from a frustrating situation to a better dispensation relates to the period from article submission to eventual publication. Especially in medical research and health sciences "the intensity and volume of research related to COVID-19 has been unprecedented and governments and funders around the world have been calling for rapid and open sharing of research the outputs" (Shearer et al., 2020, para 6). The publication of COVID-19 related papers have been greatly speeded up compared to the norm. Shearer et al. (2020, para 7) referred to concerns regarding quality control of publications "because of the speed with which research outcomes are being shared". They added, however, that "widespread openness can

lead to increased scientific scrutiny and more rapid identification of inaccurate research conclusions. This shows that quality assurance can be implemented in such an environment." I trust that this new trend, as one positive corollary of the Covid-19 pandemic, will set the tone for accelerated publication in other fields as well, such as education.

Conclusion

In this paper it is argued that physical distancing, isolation and an absence of face-to-face meetings with participants and respondents, as ramifications of the current Covid-19 pandemic, do have an adverse effect on research projects, research processes and data generation. Furthermore, researchers' professional development and career prospects are seriously hampered, most notably those of early career academics. These predicaments considerably outweigh the admitted positive effects of the pandemic on research endeavours.

It is clear that the researcher has to make the most of the current virtual communication during data generation, conferences and interaction with colleagues and fellow project participants, trusting that vaccination will sooner rather than later ensure that physical distancing will become unnecessary during research.

References

Anon (2021): Miscommunication: the problem with texting. https://www.scribendi.com/academy/articles/miscommunication_and_texting.en.html (Accessed 13 February 2021).

Ganesan, R. (2021): Fast and reliable internet connectivity brings new hope to rural villages. https://news.microsoft.com/en-in/features/fast-and-reliable-internet-connectivity-brings-new-hope-to-rural-villages/ (Accessed 11 February 2021).

Gardner, M. (2021): HE and research face 'historic watershed', says council. https://www.universityworldnews.com/post.php?story=20210204131317236 (Accessed 4 February 2021).

International Science Council (2021): What does 'transformation' mean amid the disruption of COVID-19? https://council.science/current/news/what-does-transformation-mean-amid-the-disruption-of-covid-19/ (Accessed 1 February 2021).

Jørgensen, T. & Claeys-Kulik, A.-L. (2021): What does the future hold for Europe's universities? https://www.universityworldnews.com/post.php?story=20210204091600372 (Accessed 6 February 2021).

Livingstone-Peters, S. (2020): COVID-19 Implications on Transdisciplinary Research in Africa. https://council.science/current/news/covid-19-implications-on-transdisciplinary-research-in-africa/ (Accessed 7 February 2021).

Marinkovic, D. (2020): What is the impact of COVID-19 on your Research/Academic activities? https://www.researchgate.net/post/What-is-the-impact-of-COVID-19-on-your-Research-Academic-activities (Accessed 1 February 2021).

Musinguzi, G. & Asamoah, B. O. (2020): The Science of Social Distancing and Total Lock Down: Does it Work? Whom does it Benefit? *Electronic Journal of General Medicine*, 17(6), em230.

Nutten, T. (2021): Adjusting to the New Normal. https://www.purdue.edu/caps/covid-19/adjusting-to-new-normal.html (Accessed 22 February 2021).

Offord, K. (2020): How Social Isolation Affects the Brain. *The Scientist*. https://www.the-scientist.com/features/how-social-isolation-affects-the-brain-67701 (Accessed 15 February 2021).

Prata-Linhares, M., Cardoso, T. S. G., Lopes-Jr., D. & Zukowsky-Tavares, C. (2020): Social distancing effects on the teaching systems and teacher education programmes in Brazil: reinventing without distorting teaching. *Journal of Education for Teaching*, 46(4), 554-564.

Schiffer, P. & Walsh, J. (2020): Known Unknowns. *Inside Higher Ed*, October 13. https://www.insidehighered.com/views/2020/10/13/impact-social-distancing-process-and-outcomes-university-research-opinion (Accessed 11 February 2021).

Shearer, K., Rodrigues, E., Amaro, B., Horstmann, W., Nixon, W., Selematsela, D., Whitehead, M. & Yamaji, K. (2020): COVID-19 has profoundly changed the way we conduct and share research. Let's not return to business as usual when the pandemic is over! https://blogs.lse.ac.uk/impactofsocialsciences/2020/09/24/covid-19-has-profoundly-changed-the-way-we-conduct-and-share-research-lets-not-return-to-business-as-usual-when-the-pandemic-is-over/ (Accessed 11 February 2021).

Sikali, K. (2020): The dangers of social distancing: How COVID-19 can reshape our social experience. *Journal of Community Psychology*, 48, 2435-2438.

UNICEF (2020): Physical not social distancing. https://www.unicef.org/sudan/press-releases/physical-not-social-distancing (Accessed 7 February 2021).

Prof. Dr. JP Rossouw, North-West University, South Africa