



Research Enterprise in Covid-19 Times: Establishing the New Normal

Peter G. Waterworth^{1✉}

^{1✉} Deakin University, Australia, pewaterworth@yahoo.com.au, Orcid ID: [0000-0001-6004-5057](https://orcid.org/0000-0001-6004-5057)

Article Info

Abstract

History Articles

Received:
5 August 2020
Revised:
30 March 2021
Published:
15 April 2021

What impact has the spread of the covid-19 virus had upon research programs in universities? The virus has been resistant to government measures to restrict its spread and the resulting health crisis has led to an economic crisis which is impacting every part of the global economy. Research enterprise has been affected in many ways particularly as research resources have been diverted into medical and strategic crisis response. This paper describes the impact of the pandemic in Australia on research departments of universities and analyses the implications of this impact for researchers and writers. It draws attention to the way research commissions from government departments and grants from research funding bodies are redirecting research funds to covid related projects and away from the tradition pre-covid priorities. Finally, it describes ways that research departments and individual researchers can adjust to the new normal in the research environment

Keywords:

Covid-19, Research Development, Research Priorities, International Research Collaboration

How to cite:

Waterworth, P. G. (2021). Research enterprise in covid-19 times: Establishing the new normal. *EduBasic Journal: Jurnal Pendidikan Dasar*, 3(1), 69-78.

Info Artikel

Riwayat Artikel
Diterima:
15 Agustus 2020
Direvisi:
30 Maret 2021
Diterbitkan:
15 April 2021

Abstrak

Apa dampak penyebaran virus covid-19 terhadap program penelitian di universitas? Virus ini telah dilawan dengan tindakan pemerintah untuk membatasi penyebarannya dan krisis kesehatan yang diakibatkannya telah menyebabkan krisis ekonomi yang berdampak pada setiap bagian ekonomi global. Upaya penelitian telah terpengaruh dalam banyak hal terutama karena sumber daya penelitian telah dialihkan ke dalam respons krisis medis dan strategis. Makalah ini menjelaskan dampak pandemi di Australia pada departemen penelitian universitas dan menganalisis implikasi dari dampak tersebut bagi peneliti dan penulis. Hal ini menarik perhatian bagaimana cara komisi penelitian dari departemen pemerintah dan hibah dari badan pendanaan penelitian mengarahkan dana penelitian untuk proyek-proyek terkait covid dan jauh berbeda dari prioritas tradisi sebelum covid. Akhirnya, makalah ini menjelaskan bagaimana cara departemen penelitian dan peneliti individu dapat menyesuaikan diri dengan keadaan normal baru di lingkungan penelitian.

Kata Kunci:

Covid-19, Pengembangan Penelitian, Prioritas Penelitian, Kolaborasi Penelitian Internasional

Cara Mensitasi:

Waterworth, P. G. (2021). Research enterprise in covid-19 times: Establishing the new normal. *EduBasic Journal: Jurnal Pendidikan Dasar*, 3(1), 69-78.

INTRODUCTION

Research is conducted in a large number of very diverse settings but it is largely led or driven by university-based research. Universities tend to create the ideal setting for research enterprises and attract funding from a large number of government and private organisations. Academic research departments in universities provide not only the training environment for new graduate research students but also contain a collection of highly skilled, experienced researchers who not only teach the research process but also conduct valuable research in their own right. University research has been impacted in a number of dramatic and challenging ways by the spread of the covid-19 virus. This paper describes the nature of the effects that the covid pandemic has inflicted upon populations and economies nationally and globally and focuses attention upon research enterprise and the higher education system in Australia, both of which have been regarded as a protected and privileged-academic environment within an advanced western economy.

METHODS

The paper enumerates the broad impact of the pandemic upon societies in general and considers the implications and consequences of those seismic disturbances upon many aspects of life. It then analyses the broader consequences of these factors for their impact upon the academic research process. Finally, it proposes a number of responses that may be made by universities to the changed national and global research landscape.

RESULTS AND DISCUSSION

Social and Economic Impact of Covid-19

Covid-19 is spread through the sharing of liquid droplets from the mouths and noses of infected people through close human contact and the contamination of objects and clothing that has been touched by infected people, in much the same way that flu is spread. Before its virility and infectiousness were known or understood, covid-19 had spread progressively to many thousands of people. Since the world is so connected through international air travel, the virus spread, eventually, to every continent causing

serious infection to most who came in contact with it and causing death. Some people who contract the virus remain asymptomatic and become, therefore, very potent yet unaware carriers of the disease. Table 1 shows the extensiveness of the spread of the virus to a number of nations within the South East Asian region and Australia, and for comparison, the US and UK. Deaths per million have been far more constrained in the South East Asian region.

Table 1. Health Impact of Covid-19 in Selected Countries

Countries	Cases (m)	Active cases	Deaths	Deaths/m pop	Pop (m)
USA	4634434	2278078	155079	468	331.1
UK	302301	N/A	45999	677	67.9
Indonesia	106336	36986	5058	18	273.7
Singapore	51809	5474	27	5	5.8
Thailand	3304	135	58	0.8	69.8
Malaysia	8964	223	124	4	32.4
Australia	16303	5495	189	7	25.5

Source: Worldometer. (2020). Covid-19 coronavirus pandemic update 31 July 2020 [Online]. <https://www.worldometers.info/coronavirus/>

The virus has, by the same token, had a massive debilitating effect upon the health infrastructure of almost every country, and, as a consequence of measures to contain new outbreaks of infection, upon the economic infrastructure as well. Governments have had to restrict the movement of people from one place to the next and have required infected people or those suspected of infection to be quarantined or isolated—usually under medical and government supervision. Moreover, the public has been required to exercise various precautions such as social distancing, hand washing, and limiting or eliminating multiple person-to-person contact they have with people outside their immediate families. These conditions have given rise to a number of consequences including the following:

Restrictions on movement and upon interaction with other people

Australia is currently in its second wave of infections and the locus of the second wave is the state of Victoria. There are restrictions requiring the limiting of travel to the

immediate local area, closure of restaurants and coffee shops, restrictions on shopping, limits on the number of people who may congregate together and the requirement that all people must wear a face mask when outside of their homes. Such restrictions are having a devastating effect upon local businesses not only in retail and food but also in associated industries.

Limits on local, interstate, and overseas travel

Australians are not permitted to travel interstate without a permit and roadblocks operate on most state borders. International travelers arriving in Australia are required to isolate in supervised hotel settings at their own expense for a period of two weeks and be tested negative for the virus before being released. Victorians are not permitted to visit tourist venues and are only permitted to leave their homes for essential purposes such as medical emergencies, to buy essential food, to work or go to school if it is not possible to work or study from home and for exercise. These measures have decimated the travel and hospitality industries and associated support industries and have caused the financial instability of the airlines.

Massive government expenditure on income support programs

The Australian Government has provided income support to people who have lost their jobs because of the pandemic, to businesses which have been impacted by fewer customers, to people who cannot pay their housing rent and to people who have to be quarantined and will have reduced income during their period of quarantining. Australia's national debt will increase to the highest level since the post-war period and the country will go into an economic depression as damaging as the great depression of the last century. The government, therefore, has begun to establish different priorities in the funding it offers in education and the arts (Croucher & Locke, 2020).

Changes to employment and schooling

There has been a mass movement towards working-from-home and online schooling. Private companies have suffered revenue loss and have had to reduce employment levels, whereas Government

bureaucracies and the public service have escaped the need for such savage cuts to jobs.

Differential impact upon different segments of the population

The virus has had a greater impact upon some ethnic groups within western communities than others, particularly black and Asian people (Rinaldi et al., 2020). Men have succumbed to the illness in greater numbers than women, especially in older age groups. Those with lower socio-economic status have experienced a greater rate of infection. As in other serious infections, it has had a greater impact upon people with comorbidities such as chronic heart or lung conditions or diabetes or obesity and, because of that, it has affected elderly people in a far more dramatic fashion because the elderly are more likely to be carrying these conditions. Healthcare workers have contracted the virus in greater numbers than the general population because of the nature of their work in treating infected patients. In social and economic terms, women and young people have suffered a greater loss of employment and mid-career people (young parents with young families) have suffered a greater impact upon their conditions of work (Amano-Patiño et al., 2020a; Frederickson, 2020).

Impact of Covid-19 on Higher Educational and Research

The educational system has needed to respond to the health challenges of covid-19 in order to halt the spread of the virus and to protect the health and well-being of teachers and students (Jalal et al., 2020). The major response of educational institutions has been to lower the risk of infection, particularly in non-infected environments, and to manage staff and student well-being in infected ones. The disruption to educational institutions which happened shortly after the initial infection of the Australian community resulted in childcare centers, schools, and universities being closed down for varying amounts of time depending upon the success of the public health measures put in place to reduce risk in these settings. A number of consequences of this disruption have had an increasingly serious impact upon higher education and research within the country.

Transfer of learning and academic work to online mode

The initial closure of schools and universities impelled Australian teaching staff at these institutions into remote learning alternatives whether they liked it or not. As a consequence, a number of inferior models of online learning were adopted with dubious results. This has caused a review and deeper study of online options. Moreover, international students who had departed from Australia with the onset of the pandemic were required to employ online learning approaches which they may not have readily understood (Croucher & Locke, 2020). Barn (2020) suggests that this period may stimulate a more concerted permanent development and utilisation of digitalised methods of course delivery. Students may still have concerns that a move to online course delivery will always be inferior to face-to-face delivery—especially international students. Courses that require laboratories, clinics, wards, workshops, construction sites, or one-to-one access to clients or patients or on-site practicums may be disadvantaged in the newly developed dependence upon online learning (Watermeyer et al., 2020).

Scaling down of international education programs

Australian universities have relied upon a large intake of international students in higher education courses to supplement university income (Baker & Hunter, 2020). In pre-covid times, traditional government support for university courses has been steadily decreasing at the same time as revenue from overseas students has been increasing. University dependence upon these supplementary funds has normally been funnelled into research activities. It has been estimated that more than 40 percent of research funding to universities has come from overseas student fees (Svanholm, 2020). The loss of this financial support for research has introduced serious challenges in the maintenance of existing research programs and the continuation of existing research infrastructure but has also put the funding of new research in real jeopardy (Gornitzka & Stølen, 2021). The impact also happens due to students' scaling

down perspective (Marinoni et al., 2020; Mok et al., 2021).

Loss of university staff and changes to staff working conditions

Fewer students and lower financial support to maintain existing programs have meant that universities have had to reduce overall staffing levels. Some universities have negotiated cuts in salaries for all staff across both academic and administrative departments. Some have offered staff voluntary redundancy packages. Some have reduced the number of part-time and casual staff and some have cut back on research staff or reallocated research staff to different areas of work (Croucher & Locke, 2020).

Academic staff has sometimes had to accept reassignment to non-research-based activities or to more administrative activities within research departments. The balance between teaching and research has been upset and staff are now tending to spend more time on teaching than research activities (Baker & Hunter, 2020). The semi-professional and administrative aspects of research have been predominantly passed over to women and junior researchers (Alon et al., 2020; Amano-Patiño et al., 2020). In the reorganisation of the work of universities, the quality assurance components of the work have been ignored as more pressing organisational problems have had to be faced (Cremonini et al., 2015). There has therefore been a disruption to the accountability and governance systems of these organisations (Rinaldi et al., 2020).

Academic teaching staff have had to teach, assess and supervise their students through online methods and they have been encouraged to work at home wherever possible. Academics have therefore had to sharpen their skills in using online communication technologies including Zoom, email, webinars, and chat services. Working from home has placed a particular burden upon female or mid-career academics who have had to supervise their own children in home-schooling programs. The traditional gendered division of labour has been the deciding factor in determining such work values (Amano-Patiño et al., 2020a).

Health concerns about private child care have led many female academics to reject

government offers of free or subsidised child care in favor of them taking care of their own children despite the impact of such acts upon research productivity (Frederickson, 2020; (Amano-Patiño et al., 2020b).

A decline in economic activity within the nation as a whole has resulted in the reprioritisation of the value of education in the minds of some higher-degree students and reallocation of time to domestic duties and the possibility of work (if it can be found) (Cho & Kurpierz, 2020; Grossi et al., 2020).

Redirection of research focii and the advancement or rationalisation of research projects

The covid response has had a disrupting impact upon the pressing and sometimes emergency needs of the community and this has led to a re-evaluation of research priorities and research values (Bapuji et al., 2020; Baker & Hunter, 2020). Research data has been crucial in informing the various divisions of government of the preferred way of containing the pandemic and providing better health outcomes for the community. The medical, biological, pharmaceutical, and epidemiological aspects of the crisis have demanded high-quality research data so these research sectors have had to be bolstered with massive fund injections and greatly increased staffing levels. The public policy response to the pandemic had required the redirection of research priorities (British Council & Oxford Economics, 2012).

New research projects have largely been covid related in their scope and design. Apart from the medical research mentioned above, and the search for a vaccination, research projects about the management of the crisis in organisational ways have been prioritised. These have included research about the reopening of schools, child care centres, and universities; projects about online learning; projects about covid testing protocols and community education; research about provision of financial support to ailing businesses; development of new modes of work in the post-covid era; and many more. Many of these projects have favoured particular fields of study or interdisciplinary studies in economics, biology, accounting, and STEM, just to name a few (Amano-Patiño et

al., 2020a; Frederickson, 2020; Rinaldi et al., 2020). In addition, new doctoral research has become more focused upon issues arising from the covid crisis (Croucher & Locke, 2020; Onyema et al., 2020).

Redevelopment of international research efforts

Interinstitutional and international research remain a central and growing part of the research strategies of Australian researchers and Australian research institutes (Salim & Waterworth, 2015). However, the increasing stresses associated with readjusting higher education domestically has diverted the attention of many researchers away from international collaboration and onto managing the serious issues in the higher education sector. Moreover, the problems associated with regular electronic communication have slowed research processes down. Face-to-face collaboration is regarded by many as essential to the building of team sentiment – particularly with research partners in the Asian region.

Australia's major competitors in attracting international students into higher education programs, the UK and USA, have suffered a greater impact from the pandemic than Australia itself as shown in Table 1 above. Alternatives to foreign study are beginning to impact student choice of higher degree programs. However, less than 6 percent of international students intend to change a course for which they are enrolled in Australia due to the coronavirus (Svanholm, 2020).

Research collaboration between Australia and China has continued to grow over the last decade and now surpasses Australian-US research collaboration (Baker, 2020). This has occurred despite tense diplomatic exchanges between Australia and China in the last 12 months. China is now Australia's major research collaborator and the collaborative projects are most common in science and engineering. A sense of collaboration between publishers of the research quantum and struggling universities has been observed in some publishing companies that have eased the limits on access to research publications. The publisher, OUP (<https://academic.oup.com/journals/pages/coronavirus>) has provided free access to its covid related research resources during the pandemic

Reconfiguring publication of research

Remarkably, the rate of submission of research articles to academic journals has increased since the Covid crisis (Amano-Patiño et al., 2020). yet the reasons are unclear. Perhaps the increased time spent at home while working from home has stimulated researchers to complete writing tasks previously put off. Perhaps an uninterrupted work schedule has afforded researchers time to concentrate for longer periods of time on the more complex parts of their papers, thus bringing them to completion. It would be surprising to see this surge continue once the new work and research culture settles in.

Senior, experienced researchers are now dominating new research priorities, particularly in covid related projects (Amano-Patiño et al., 2020). Their seniority, status, and reliability may commend them to the more pivotal research enterprises which government agencies have demanded (Baker & Hunter, 2020). Interestingly, interdisciplinary studies have emerged as more relevant to solving current critical problems since they bring together perspectives in science, biomedicine, economics, pathology, psychology, sociology, and organisational studies, amongst others.

CONCLUSION

The 'normal' mode in which universities and research departments used to manage and operationalise research functions have been severely disrupted with the onset and increasing grip of the covid-19 pandemic. It is difficult to see a return to that normal mode of operation if a covid-19 vaccine is not discovered in the near future. A 'new normal' set of research protocols and a 'new normal' research infrastructure is likely to continue to be necessary. Our research institutions may have to maintain their crisis management strategies for a large number of years.

The impact of the pandemic upon research operations within the academic and public space has been unprecedented. Universities in Australia have had their research and higher degree programs severely curtailed, mainly because of a lack of fees from international higher degree students. These fees have traditionally funded a significant

percentage of research budgets. The consequent loss of substantial research funding has affected staff levels in Australian universities and brought about the suspension of much current research and limited or redirected the uptake of new research. The impact upon highly ranked large research focussed universities that have a high proportion of international students has been particularly severe (Croucher & Locke, 2020).

On the other hand, where universities have been allocating international student fees towards ongoing running costs, the impact on their futures may be catastrophic, with the potential of university closures or amalgamations. Public monies have been redirected towards managing the health and economic impact of the crisis and much research newly commissioned by government agencies has been covid related. This has favoured some kinds of research and some kinds of research fields, and, consequently, disadvantaged others. Amidst these gloomy predictions about the reduction in research opportunities and the cessation of previously lauded research projects, there are certain bright possibilities for new normal modes of conducting research in the future.

- All faculties and disciplines have something to offer in tackling the covid crisis. While it may seem that covid research may focus only on the medical response to the crisis or the economic response to the lockdown of populations, we need to search our own areas of expertise for related areas of wisdom and insight. Educators may need to consider research opportunities on online learning or public education. Psychologists may need to consider ways of dealing with human isolation and alienation. Language scholars may need to consider research on public communication. And so the list goes on.
- We need to consider our contribution to multidisciplinary teams of researchers in the post-covid era. Interdisciplinary teams benefit from the perspectives that blend the theoretical and practical or the scientific with the expressive. The

crises we face are a mixture of problems, challenges and issues with many faces and diverse consequences.

- (3) Universities will now be required to tackle the issue of loss in student numbers in certain areas and perhaps an increase in enrolments in others as the pandemic moves into new phases. Research will be needed on the emerging opportunities for courses that may not be so rigidly tied to the formal course structures presently available. Shorter or non-credit courses may be more in demand as students seek to equip themselves for new employment opportunities in our covid response and to assist in meeting emerging community needs.
- Australian universities will need to consider the future of their institutions if the international market does not return to pre-covid levels and consider the opportunities for off-shore programs or online programs in their range of offerings. This will bring them into direct competition on a global scale with other western universities which attempt to do the same.
- The new imbalances in research opportunities will need to be addressed by governments, universities, and other research funding bodies if forms of discrimination are to be avoided. The exclusion of many women from full research opportunities needs to be addressed.

The prospects of a vaccination being discovered to protect populations from the spread of the covid-19 virus seems remote in the near future so government responses have been limited to managing the outbreak and protecting the community through regulation and limitation. The economic impact of social shutdowns have been dramatic and catastrophic and will undoubtedly be long-term. As researchers with a social conscience, we need to contribute in whatever way we can to restoring a sustainable way of life and assisting in the recovery processes. Universities are well placed to take the lead in

public debate and research efforts to achieve a healthy and economically sustainable outcome.

ACKNOWLEDGEMENT

This paper is presented at the Webinar Research in Covid-19 – the New Normal by Zoom, Universitas Pendidikan Indonesia, Kampus Serang, Indonesia, 5 August 2020.

REFERENCES

- Alon, T., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). The impact of Covid-19 on gender equality. *CEPR Covid Economics: Vetted and Real-Time Papers*, 4, 62–85.
- Amano-Patiño, N., Faraglia, E., Giannitsarou, C., & Hasna, Z. (2020a). Who is doing new research in the time of COVID-19? Not the female economists. In S. Galliani & U. Panizza (ed.). *Publishing and Measuring Success in Economics*, 1(1), 137–142.
- Amano-Patiño, N., Faraglia, E., Giannitsarou, C., & Hasna, Z. (2020b). The unequal effects of covid-19 on economists' research productivity. *Cambridge Working Papers in Economics*, 2038, 1–12.
- Baker, J., & Hunter, F. (2020). Lack of higher education vision will kill universities, says vice-chancellor. *The Age*, 26 June 2020. [Online].
- Baker, J. (2020). China overtakes US to become Australia's leading research partner. *The Sydney Morning Herald*, 22 July 2020. [Online].
- Bapuji, H., de Bakker, F. G. A., Brown, J. A., Higgins, C., Rehbein, K., & Spicer, A. (2020). Business and society research in times of the corona crisis. *Business & Society*, 59(6), 1067–1078.
- Barn, B. (2020). The digitalisation of the university. *Wonkhe: British Higher Education Blog*, 29 April 2020. [Online].

- British Council and Oxford Economics. (2012). The shape of things to come: Higher education global trends and emerging opportunities to 2020. *British Council Higher Education Report*, 1–72.
- Cho, C. H., & Kurpierz, J. (2020). Stretching the public purse: budgetary responses to COVID-19 in Canada. *Journal of Public Budgeting, Accounting & Financial Management*, 32(5), 771–783.
- Cremonini, L., Brennan, J., Lewis, R., & King, R. (2015). *Cultures of Quality: An International Perspective: Profiles of Quality Assurance in Higher Education in Nine Countries*. (Research Report), (pp. 1-82). The Quality Assurance Agency for Higher Education.
- Croucher, G., & Locke, W. (2020). A post-corona virus pandemic world: some possible trends and their implications for Australian higher education. *Discussion Paper of the Centre for the Study of Higher Education, the University of Melbourne*. (pp. 1–7). Melbourne: the University of Melbourne.
- Frederickson, M. (2020). Women are getting less research done than men during this coronavirus pandemic. *The Conversation*, 27 May 2020. [Online].
- Gornitzka, Å., & Stølen, S. (2021). University challenge – The role of research intensive universities in crisis management. In S. Bergan et al. (eds). Higher education's response to the covid-19 pandemic building a more sustainable and democratic future. *Council of Europe Higher Education Series*, 25, 107–114.
- Grossi, G., Ho, A., & Joyce, P. G. (2020). Budgetary responses to a global pandemic: International experiences and lessons for a sustainable future. *Journal of Public Budgeting, Accounting & Financial Management*, 32(5), 737–744.
- Jalal, N. M., Dewi, E. M. P., Basti, B., & Halima, A. (2020). School well-being analysis of online learning during covid-19 in students and lecturers. *Proceeding of The International Conference on Science and Advanced Technology (ICSAT)*, 5, 958–965.
- Marinoni, G., Land, H. V., & Jensen, T. (2020). *The Impact of Covid-19 on Higher Education around the World*. (IAU Global Survey Report), (pp. 1-50). International Association of Universities.
- Mok, K. H., Xiong, W., Ke, G., & Cheung, J. O. W. (2021). Impact of COVID-19 pandemic on international higher education and student mobility: Student perspectives from mainland China and Hong Kong. *International Journal of Educational Research*, 105(101718), 1–11.
- Onyema, E. M., Eucheria, N. C., Obafemi, F. A., Sen, S., Atonye, F. G., Sharma, A., & Alsayed, A. O. (2020). Impact of coronavirus on education. *Journal of Education and Practice*, 11(13), 108–121.
- Rinaldi, L., Cho, C. H., Lodhia, S. K., Michelon, G., & Tilt, C. A. (2020). Accounting in times of the covid-19 pandemic: a forum for academic research. *Accounting Forum*, 44(3), 180–183.

- Salim, H., & Waterworth, P. G. (2015). Collegueship and professionalism in inter-institutional cooperation: international collaboration in research. *Surindra Journal of Local Development*, 8(1), 67–86.
- Svanholm, A. G. (2020). The impact of COVID-19 on study abroad: April 2020 survey results. *Educations Media Group*. 24 April 2020. [Online].
- Watermeyer, R., Crick, T., Knight, C., & Goodall, J. (2020). COVID-19 and digital disruption in UK universities: Afflictions and affordances of emergency online migration. *Higher Education*, 81, 623–641.