

Implications of COVID-19 on Researcher Development: Achievements, Challenges and Opportunities

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Abstract

This chapter reflects on strategic decisions undertaken, challenges experienced, and outcomes achieved, during the COVID-19 pandemic, when delivering a centralised online programme of researcher development for postgraduate researchers (PGRs). This multi-viewpoint chapter explores, the facilitators' experience of delivering online workshops, PGRs participation and the programme management's experience of co-ordinating the activities. This study finds issues such as internet connectivity cause stress to PGRs and facilitators, the technical expertise of facilitators must be continuously developed, and highlights the need for a better understanding of online learning etiquette. Lastly, to improve practice it is important to account for socialising and wellbeing. This chapter also identifies other challenges with this delivery method and highlight potential ways to maximise opportunities to enhance the overall PGR and staff experience.

Keywords

Higher Education; university; postgraduate; researcher; online; COVID-19; training; development.

Contextual Background

The needs of postgraduate researchers (PGRs) within UK Higher Education are quite different from those faced by either undergraduate or postgraduate taught students. Instead of having to pass scaffolded levels within a hierarchy of education, PGRs are on a continuous learning journey. Furthermore, there are a variety of modes of delivery that vary depending upon the type of programme PGRs are undertaking. Therefore, a bespoke type of researcher development delivery, that will help maintain PGR motivation and engagement, is pivotal (Delahunty, Verenikina & Jones 2013).

To support this active community of PGRs, it is essential that a university provides a portfolio of training and development opportunities. Researcher development workshops at Bournemouth

University have traditionally been provided synchronously and on campus. Year on year the researcher development programme has continuously improved based on PGR and staff feedback. Whilst there was already growing demand from the PGRs for the provision of a more flexible and accessible researcher development programme, that would support their holistic development (Devis-Rozental 2018; Devis-Rozental 2020), there had previously been limited changes across the organisation with respect to any form of online provision. COVID-19 required the university to react, and respond, rapidly to maintain the level of learning and development opportunities expected by all student populations including PGRs.

When national lockdown was implemented, and University campuses across the UK closed, the instinctive reaction for our Researcher Development Programme was to withdraw all forthcoming workshops. There were countless uncertainties to contemplate; how long was access to campus going to be restricted, what immediate support did our PGRs require, what additional work did University staff now have to contend with? There was a need to reprioritise workloads and assist with the initial lockdown support efforts.

Very quickly there was a realisation that lockdown was extending longer than originally anticipated, even if campus-based teaching was to resume, there would likely be significant restrictions on resources and accessibility. Providing opportunities for researcher development is a guiding principle of the UK Quality Code for Higher Education (Quality Assurance Agency 2018) and even during a global pandemic, our commitment to these principles remained. Highlighting the on-demand resources available, although extensive, was not a suitable substitute to the diversity of provision previously offered. Synchronous sessions needed to be reinstated to ensure our PGRs still had access to researcher development opportunities, and holistic support, through a sense of continuity and community during an increasingly worrying and isolating time (Farrell & Brunton 2020).

While there were a wide range of digital learning technologies available to deliver researcher development sessions, as programme management, there was an awareness of the potential challenges experienced by our facilitators, many of whom had been thrown into the 'deep end' with the need to learn new technologies overnight. Thus, the choice of delivery method, and platform, was given to the facilitator to reduce additional expectations on them. With the PGRs experience and engagement at the forefront of our thinking (Farrell & Brunton 2020), we were cognisant of the confusion multiple delivery platforms may cause, therefore personalised emails were sent to attendees outlining the specific joining instructions per session to help mitigate this challenge. There is increasing acceptance of the variety of delivery platforms, and going forward a more streamlined,

less administratively heavy approach, should be implemented to benefit the experience of all stakeholders.

As highlighted, initially there was a dip in synchronous development opportunities provided. A year on, there have been accelerated planned changes for the Researcher Development Programme driven centrally by the Doctoral College in response to the ongoing disruption caused by the COVID-19 pandemic. Continued live online workshops present their own challenges, including the recently coined 'Zoom fatigue' (Sklar 2020) and ongoing heavy academic and administrative workloads in adapting to alternative delivery methods.

Going forward, there is a delicate equilibrium required between the amount of synchronous, and asynchronous, resources and opportunities offered to ensure these consider the social and psychological aspects of learning (Waight & Holley 2020). It is important to provide appropriate spaces for conversation, networking, and encouraging a sense of belonging beyond the confinements of a screen to help mitigate the potential risk of 'technostress' for PGRs and facilitators, and to support the wellbeing of our academic communities (Devis-Rozental 2018; Devis-Rozental 2020). There remains an opportunity for further diversification and adaptation to online delivery of researcher development, to ensure needs are met, and the missing interactions are addressed (Delahunty et al. 2013).

At times, delivering a comprehensive suite of researcher development workshops via this new approach, amid a global pandemic, has felt like a phenomenal challenge which has considerable factors and changes beyond our control, namely technological issues. However, indicative feedback received to date has been largely positive surrounding the changes. While it has neither been easy or straightforward, the collaborative approach with facilitators and learning technologists, and the sympathetic attitude of our PGRs, has helped and driven us to adapt at pace. This drastic and dynamic shift in the delivery method, for synchronous researcher development sessions, has been invaluable in exacerbating the move to more diversified provisions in supporting our distinctive PGR community to engage in research and professional development opportunities. Nevertheless, while the changes present many opportunities, we must take the time to carefully reflect on them before making a lasting pivot to this new way of delivering researcher development.

In this case study, we further reflect upon the challenges experienced, and outcomes achieved, during the COVID-19 pandemic, when delivering this centralised programme of researcher development for PGRs at Bournemouth University. Key lessons learnt and opportunities are defined and discussed, to inform future programme design and delivery. Crucially, in the case study we place a multi-

dimensional lens on this experience, considering our key stakeholders, i.e., the PGRs attending research development sessions and the workshop facilitators delivering online sessions.

The implications and significance of this adjustment to online delivery for researcher development on PGR learning and experience, and its facilitation, were previously unknown. Whilst the lessons to be learnt from this case study will influence future delivery, there is little doubt that online provision of development workshops for PGRs will remain a core element of the portfolio of support provided by the Doctoral College for the foreseeable future.

Research Procedure

In this study we adopted an interpretivist philosophical approach to enable an understanding to be developed regarding the thoughts and views of the research participants (PGRs and facilitators) and relating to their experience of online researcher development workshop held during the period April 2020 to November 2020. As such, we utilised an inductive approach so that inferences can be made from the data collected (Woo, O'Boyle & Spector 2017).

This is a mono-method study, with a data collection strategy formulated around the use of two different, but complementary, qualitative surveys. The questions used in each survey are detailed in Table 1. The first survey was targeted at the researcher development programme workshop facilitators and related to sessions which were delivered online in response to the University campus closure instigated to mitigate the spread of the COVID-19 virus. The second survey was targeted at the PGRs who attended such online development workshops. Note: the participant PGRs attending workshops, may not have attended the workshops delivered by the participant facilitators.

In both cases, there were no major defining characteristics in the populations. Sampling for this research has therefore been based upon non-probability self-selection from each relatively homogenous population, i.e., a call for participants was emailed directly to 33 facilitators, and to all PGRs, inviting them to take part in the research. Data were collected only from those who self-selected themselves, and wished to support the research on a voluntary, and anonymous basis. We wish to thank these participants without whom this research could not have taken place.

A favourable ethics opinion for this study was given by Bournemouth University in line with our Research Ethics Code of Practice (Reference 33605). This is a cross-sectional study collating the thoughts and views of the participants at the time of data collection. There has been no attempt to

cross-reference these opinions against those held by the same facilitators, or PGRs, from before the COVID-19 pandemic, as no suitable comparison data were available.

The primary data collection questions asked in the qualitative survey for facilitators.	The primary data collection questions asked in the qualitative survey for PGRs.
<ul style="list-style-type: none"> i. What have been the top 5 benefits that you have experienced from the Researcher Development Programme workshops being moved to online delivery in 2020? ii. During any of the online Researcher Development Programme workshops that you have organised and/or delivered in 2020, what do you think are the top 5 things that have worked particularly well? iii. During any of the online Researcher Development Programme workshops that you have organised and/or delivered in 2020, what do you think are the top 5 things that have NOT worked particularly well? iv. What have been the top 5 challenges that you have personally experienced from the Researcher Development Programme workshops being moved online in 2020? v. What are the top 5 ways that your organisation and/or delivery in 2020 of online Researcher Development Programme workshops could have been improved? 	<ul style="list-style-type: none"> i. What have been the top 5 benefits that you have experienced from the Researcher Development Programme workshops being moved to online delivery in 2020? ii. During any of the Researcher Development Programme workshops that you have attended in 2020, what do you think are the top 5 things that have worked particularly well? iii. During any of the Researcher Development Programme workshops that you have attended in 2020, what do you think are the top 5 things that have NOT worked particularly well? iv. What have been the top 5 challenges that you have personally experienced from the Researcher Development Programme workshops being moved online during 2020? v. What are the top 5 ways that your experience of participating in online Researcher Development Programme workshops during 2020 could have been improved?

Table 1 - Primary data collection questions asked in the qualitative surveys for facilitators and PGRs.

We carried out a face validity test to confirm that there was no obvious ambiguity or overlap across the questions being asked (Saunders, Lewis & Thornhill 2016). A small-scale pilot was completed to confirm this. Data collection, using the JISC Online Surveys tool, was then undertaken in the 7-week period running from 12 October 2020 to 30 November 2020, with both surveys being open for this entire period. Two reminder emails were issued during this period to encourage further participation in the research. In total, data were collected from 6 facilitators and 20 PGRs.

We used Recursive Abstraction for analysis of the data collected. Recursive Abstraction is an iterative process specifically for analysing qualitative data from a range of sources including interviews, focus groups, observations, narrative and questionnaires (Polkinghorne & Taylor 2019). The process follows

a series of repeatable steps to identify initial high-level Themes, and Codes within these themes. As the data are collapsed, new Themes and Codes emerge. By combining and collapsing the data repeatedly, final Themes (high-level groups or categories) and Codes (low-level subject indicators) are revealed (Polkinghorne & Taylor 2021). It is by reviewing these final Themes and Codes that patterns and trends within the qualitative data collected are revealed.

As defined by Polkinghorne and Arnold (2014), the six steps of the Recursive Abstraction process are:

- **Step 1.** Highlight the data of interest.
- **Step 2.** Extract the highlighted data.
- **Step 3.** Paraphrase the data using the researchers own words yet retaining the meanings.
- **Step 4.** Group the paraphrased data relating to different topics together to form Themes. Data within a Theme should always be connected.
- **Step 5.** Replace the paraphrased data with Codes. Codes still encapsulate the original meanings.

Repeat steps 4 and 5 as required to collapse the data as much as possible.

- **Step 6.** Check Codes against the original data to eliminate errors, and then any identified patterns and trends are revealed. Make recommendations based upon this new understanding of the phenomena being investigated.

Data Analysis

Facilitators

Following our application of the Recursive Abstraction process, a summary table for the facilitator data collected and analysed, is detailed in Table 2. Each participating facilitator has been awarded a label in the range F1 to F6.

Themes	Codes	F1	F2	F3	F4	F5	F6
Facilitators	Stress	*	*	*	*	*	*
	Training		*	*			*
PGRs	Attendance	*	*	*	*	*	*
	Engagement		*	*	*	*	
	Interaction	*	*	*	*	*	
	Motivations	*		*	*	*	*
Session Delivery	Breakout rooms			*		*	
	Chat function	*	*	*			*
	Recordings	*	*				
Session Structure	Blended		*	*	*	*	
	Management	*	*	*	*		*
	Technology	*	*	*	*	*	*

Table 2 – Summary table for facilitators’ data following Recursive Abstraction Analysis.

Theme – Facilitators

All participants reported a change in their level of stress which was directly associated with the organisation and delivery of online development sessions for PGRs. In one case, the stress was reduced due to the removal of travel time and the potential for delays. Another example was a reduction in stress resulting from the ability to slot online teaching more easily within a portfolio of other academic activities on the timetable, as there was no requirement for room bookings.

“I’m uncertain about how it will go, and so I feel like I have less control, even though I might actually have more control” (F2)

However, in all other cases, the stress was reported as being at an increased level. Control was an important factor, and the insecurity of not knowing if home broadband would function or not as required, and when required, to support online teaching, was a common response. Stress was also reported due to the on-going merging of work and home life, and general concerns about technology working as planned. Facilitators reported the need for training to enable them to make use of the available technologies more effectively.

“I didn't really understand all the things that I needed to know” (F2)

Theme – PGRs

Attendance was considered to be higher on the online workshops. This may have been because the PGRs appreciated the effort behind the online provision, or that they felt more comfortable attending from their own homes.

“I just get the general impression that people feel more at ease in their own homes” (F3)

Late arrivals joining the online workshops was recognised as being a problem as the facilitator had to both monitor and admit, students during the live session, when they were already balancing technological needs, and delivering their workshop. It was reported that there was often a tension between starting the workshops on time, and therefore leaving behind the late arrivals, or waiting for PGRs to join the session, who might never arrive and thus losing valuable workshop time as a result.

Engagement levels were reported as being higher, with PGRs potentially learning more as a result. However, the online delivery was considered limiting in its ability to support networking between the facilitators and the PGRs, and the PGRs and their peers. Some of the networking benefits were lost as a result. This could be partly as a consequence of reduced interactions during break times, and students keeping their cameras off during sessions. Facilitators noted it was harder to find the energy to deliver an engaging online workshop, when it is difficult to know who is there, and if they are listening. Nevertheless, the overall consensus on PGR engagement during the online workshops was positive.

“It is considerably more difficult to draw energy from a group, when staring at a serious of blank screens, as most participants leave their cameras off” (F4)

Theme - Session Delivery

The use of breakout rooms within the online platform enabled PGRs to work in small groups. The PGRs appeared to appreciate this and had more conversations as a result. Regarding the use of the

chat functions, PGRs were able to ask questions at any point in the workshop. This removed barriers for some, and encouraged a more uniform level of interaction, without disrupting the workshop. Facilitators mentioned that they could return to the chat function afterwards to collate questions asked, which enabled them to respond later in some cases. Similarly, recording the sessions provided PGRs with a resource that they could return to if they wished to seek clarification on the material presented.

"People seem more comfortable raising questions in the chat area than when in person" (F3)

Theme - Session Structure

The transition to online workshops was considered a good thing, enabling sessions to be delivered that would otherwise need to be cancelled, and bringing together PGRs for mutual support and learning. However, the management of such sessions raised challenges. For example, fixed breaks were required, and needed to be clearly signposted in advance to help manage PGRs expectations and aid the flow of each session. Furthermore, facilitators reported that PGRs didn't always demonstrate good timekeeping, i.e., arriving late and leaving session early, with resulting disruption. Additionally, PGRs often appeared to be multi-tasking and perhaps consequently not concentrating fully.

"[A] fixed break in the middle of a long session helps students to plan" (F1)

All facilitators recognised the problems of internet connectivity for both themselves and the PGRs. It was also noted that a wider range of technology-enhanced learning tools could be used, with the result that their teaching could be more varied, engaging and interesting.

"Online is more informative for students" (F1)

Postgraduate Researchers

As with the data analysis for the facilitators' survey responses, following our application of the Recursive Abstraction process, a summary table for the PGR data collected and analysed is detailed in Table 3. Each participating PGR has been awarded a label in the range P1 to P20.

Theme	Codes	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20
PGRs	Health							*	*	*			*		*	*					
	Pre-work / post-work	*	*	*	*	*			*	*	*		*		*	*		*	*	*	*
	Interaction	*	*			*			*	*	*				*					*	
Session	Environment	*		*			*			*					*	*	*				
	Materials									*					*						
	Management					*				*					*		*		*		
Programme	Accessible & informative	*	*	*	*	*	*	*		*	*	*	*	*	*	*			*	*	*
	Range of sessions	*			*	*		*	*	*	*	*									
	Technological access	*			*	*				*	*		*		*	*			*		

Table 3 – Summary table for PGR data following Recursive Abstraction.

Theme – PGRs

Many PGRs reported missing their peers. Online researcher development workshops were helpful in this regard compared to nothing being offered, but their level of social interaction with other PGRs remained limited. Seeing faces was therefore an important part of replicating the pre-COVID-19 on campus synchronous workshops. In the absence of in-person interactions, PGRs reflected that the amount of screen time they have been experiencing is high, and online delivery of workshops adds to this problem. Nevertheless, interactions during online workshops were recognised as being important for their mental health and motivation.

“It kept me motivated and engaged with the university and fellow PGRs” (P10)

Regarding the need for pre- and post-session work, some PGRs considered this as a potential problem area due to other demands on their time. This also applied to watching lecture recordings. As with the facilitator feedback, recorded content was recognised to be of value for ongoing development purposes, but the time required to watch them, and to absorb the material, proved to be difficult for some.

“...not enough time to view videos due to prior commitments and I was therefore unable to attend” (P3)

With respect to interactions with the facilitator, responses varied with some PGRs asking for more ‘question and answer’ opportunities, and others reporting that they were comfortable that enough were already being provided. Certainly, with online teaching, there was clear indication of the importance of interaction with the facilitator.

“[online sessions] need more interactions with the facilitator” (P1)

Theme – Session

The online session environment was considered safe from COVID-19, which was significantly beneficial to several participating PGRs. Furthermore, some PGRs reported fewer distractions when working from home, which allowed them to concentrate better on their learning, contrary to the facilitator findings.

For online workshops to be effective, very visual and engaging materials were viewed most positively. However, in some cases, the PGRs didn't consider that the facilitators had adapted their materials to accommodate this change in delivery method, and as a result, reported workshop materials being not always ‘fit for purpose’.

“Some presenters just present their material as a chalk and talk session when the technology offers many opportunities to design better presentations, cover topics in new ways and to confirm understanding” (P15)

Furthermore, PGRs reported facilitators taking too long on introductions across attendees, the facilitator and to the workshop material. PGRs felt the online sessions needed to ‘get to the point’ more quickly, this was one of the time-management challenges raised, alongside their desire for more networking time to be built into sessions.

“Sessions where the facilitators took more time on introductions usually never ended on time” (P19)

Theme – Programme

Certainly, the online delivery of researcher development workshops was seen by many PGRs as being accessible and informative, and the flexibility for being able to access this type of support and guidance, during a period of enforced working from home, was very much appreciated.

“It is my opinion that online workshops have been an improvement to the Researcher Development Programme and that it should be maintained after the pandemic.” (P1)

The range of sessions being offered was acknowledged to be wide and varied. Nevertheless, with the absence of on-campus support, PGRs expressed that they required an increasingly wider range of topics to be covered compared to pre-COVID-19, and topics needed to be in more depth. However, in the case of more practically orientated sessions, it was highlighted that these were more difficult to follow when delivered online.

“While online sessions are great, I think face to face sessions are better for practical sessions that involve the use of software etc” (P19)

With regards access to technology, some PGRs raised concerns regarding internet and broadband access, knowing how to access researcher development materials, and the use of Zoom for the live sessions. All of which are integral to their ability to engage fully.

Scholarship on Long-Term Impacts

With the arrival of the COVID-19 pandemic, the University was required to respond quickly so that a synchronous provision based upon online teaching, could be provided, ensuring that PGRs were still supported holistically during such a disruptive time. The staff across the UK Higher Education

sector have worked passionately, in these difficult times, to create and support an innovative learning environment, which has promoted the equality of opportunity, and increased accessibility in an agile way, to enhance the overall student experience.

In this case study we have focussed upon decisions undertaken, challenges experienced, and outcomes achieved, to derive what lessons can be learnt from this experience, and the opportunities this presents. We have identified a series of recommendations emerging from this case study:

1. Internet connectivity is an unknown variable causing stress for both facilitators delivering workshops, and PGRs attending. An open and honest conversation between these two stakeholder groups is recommended so that a more empathetic response can be obtained from both, thus reducing unnecessary stress.
2. Delivering online training is distinctly different to delivering in an on-campus format, and facilitators need training, not just in using the technology, but also in how materials appear on screen, the often-demanding requirements for pre- and post-work to be completed by the PGRs, and the opportunities for making workshops more engaging.
3. PGRs need to recognise that attending, and engaging, in researcher development workshops requires them to exhibit good timekeeping, and that they also play a role in how well the session is delivered through their participation, i.e., use of their own cameras (or not), and their interactions during 'question and answer' sessions. Improvements to workshop professional etiquette documentation and advice should be undertaken and promoted.
4. Facilitators should be aware that an important dimension of their workshop is the social aspect, and the ability for the PGRs to network and develop meaningful relationships with their peers. This is a key element of their personal and professional development. The use of chat functions and breakout rooms needs to be incorporated into sessions as much as possible, together with allocating time for conversations and relationship building. Accounting for the holistic needs of PGRs when developing these types of synchronous programmes will have a positive impact on their wellbeing, aiding both motivation and engagement.
5. Both facilitators, and PGRs, should appreciate that the time attending a researcher development workshop, is quality time which needs to be used wisely and sensitively, minimising irrelevant information, and attempting to give their full attention to get the best from the experience.
6. Researcher development programme management need to consider streamlining the administrative aspects of co-ordinating and delivering this suite of online researcher

development workshops. This is of particular importance where there is pre- and/or post-work required by attendees.

The overall arching outcome is that both facilitators and PGRs, valued researcher development workshops being delivered online, and that this form of delivery is most likely to be continued for the foreseeable future. The recommendations detailed above will now be incorporated into university guidance, practice, and strategy to ensure that the opportunity for delivering researcher development workshops online is optimised for all key stakeholder groups to enhance their experience.

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