

Early career researchers, scholarly communications and the pandemic

Interview Schedule 3 version

1 Job, work and status and impact of pandemic

Job

Q1.1.1 Job title [*Note to interviewer: please explain if an unusual designation provided*]

Q1.1.2 Start date (year)

Q1.1.3a Previous job title

Q1.1.3b Previous location of job

Q1.1.5 Do they teach as part of their contract?

Q1.1.5.1 Do they teach if it is not part of their contract

Q1.1.5.2 If yes, in either case, what type of teaching – supervision, demonstrating, lab instructor, lecturing, tutorials?

Research groups

Q1.2.1 Are they part of research group (s)? [formal or informal]

Q1.2.2 Is it international in membership? [*note to interviewer ‘international’ meaning grant enabling the project involves other institutions outside their own country or comprised researchers from other countries.*]

Q1.2.4 Who funds their current project?

Pandemic-related research

Q1.3 Is their current research related to the pandemic?

Q1.3.1 If yes, has this been a change of direction from their previous research and if so, why?

Q1.3.2 If yes, has this already benefitted them in any way?

Q1.3.3 If yes, does it promise to benefit them down the line?

Q1.3.4 If not, do they see a possibility whereby the pandemic has/might lead to any significant changes in the direction of their research? Do they want to pursue such a change in direction and if so, why?

Q1.4 In general, has grant funding in their field become more difficult / less difficult to obtain?

Q1.4.1 Whether more/less difficult, is it so as a result of the pandemic (for instance, because new areas in their speciality have been prioritised and existing ones lost their funding as a result).

Q1.4.2 Do they think that the present trend will continue/change in the future?

Work re-organisation

Q1.5.1 Has the pandemic led to any re-organisation or changes in their work place and/or role?

Q1.5.1 If not mentioned above and relevant, has their teaching load changed? (e.g., increased / decreased)

Q1.5.2 If yes to the above, has this led to their being:

a) overworked or, indeed, the very opposite (underworked)?

b) undervalued or, indeed, the very opposite (more valued)?

Q1.5.3 How *much* have they been able to attend their work place since the beginning of the pandemic? [Express as a proportion of time they used to attend, such as the same as before, half as before]

Q1.5.3.1 Were they forced to keep away for what they consider significant periods of time?

Q1.5.3.2 If yes, what has this meant for their productivity?

Q1.5.3.3 And for their morale?

Q1.5.4 If they work “in the field” (or physically away from the institution), how *much* has this continued to be possible since the beginning of the pandemic? [Express as a proportion of time they used to attend, such as the same as before, half as before]

Q1.5.4.1 If unable to do field work for what they consider significant periods of time, what has this meant for their productivity?

Q1.5.4.2 And for their morale?

Q1.5.5. Considering remote work/working from home/care obligations, as consequences of the pandemic:

a) Roughly, how many hours a week did they use to work remotely before the pandemic started and how many hours/days now?

b) Has working remotely/from home been advantageous or disadvantageous to their research? In what ways?

c) It has been said that remote teaching has proven to be more time-consuming than face-to-face teaching. Is it their experience, too? And if so, what effect, if any, did this state of affairs have on their research productivity? And their morale?

d) It has been said that remote working and/or care obligations are taking their toll on scientists, causing 'burnout' (stress and anxiety); is it so in their case? [this is a yes/no/partly question but we are looking for an open response if we can get it]

Job security

Q1.6.1 How secure do they feel in their employment situation compared to pre-pandemic times?

Q1.6.1.1 Any change since the last time they were interviewed?

Q1.6.2 Considering their tenured colleagues, as an ECR, has the pandemic impacted their employment prospects or situation more, less, or about the same? If more or less, how?

Mentoring/Assessment

Q1.7.1 Are they being mentored formally and/or informally (not contractual, not written down) in terms of their job/research? If yes, which (formal/ informal/ both)?

Q1.7.1.1 If yes, are they being mentored more, less, or about the same during the pandemic?

Q1.7.2 Do they mentor/peer support themselves?

Q1.7.3 Do they obtain any training for research (including in publishing papers)

Q1.7.4 How does their institution, national panels, and/or funders assess them? [*This could include teaching, administration, fund obtaining etc.*]

Q1.7.4.1 Is mentoring part of this assessment?

Q1.7.5 Have criteria/methods changed as a result of the pandemic? If so, how?

Q1.7.6. If not mentioned above, was the time they lost so far as a result of COVID-19 taken into consideration or not?

Sharing and Collaboration

Q1.8.1 Do they think there is a risk of losing their competitive edge through:

(a) Sharing knowledge and/or unpublished results and/or unpublished data with their collaborators on a specific research project;

(b) Sharing knowledge and/or unpublished results and/or unpublished data with colleagues/peers for purposes other than formal collaboration?

Q1.8.2 Has the pandemic made a difference in their/their group's capability to set up and/or pursue collaborative undertakings, whether on the national or the international front?

Q1.8.2.1 If so, please specify how? (e.g., travel bans make it more difficult; greater sharing of unpublished data beneficial)

Q1.8.3 Is it more or less easy to set up/maintain formal collaborations or much the same?

2 Career aims and reputation

Q2.1 Are they currently aiming for a permanent academic career in a university or similar research organisation? Confirm whether this is a definite decision or are they tending one way or the other and if so, which?

Q2.1.1 If yes, is it only if it is a pure research job?

Q2.1.2 If not, did they once think this, but is no longer their aim and, if so, what is the reason?

a) Is this because they have lost interest in university research, in research in general, or do not want to spend time doing teaching or administration? Any other reason?

b) Is it because there are no appropriate jobs available?

c) Is it because their career prospects do not look promising?

d) Are these reasons for leaving the new university sector a result of the pandemic?

e) What do they plan to do instead?

Reputation

Q2.2 Do they judge their **success** as a researcher (and that of others) by reference to the number of citations for their journal articles and/or the journal impact factors of the journals they published in.

Q2.3 Are they familiar with the H-index?

Q2.3.1 Do they use it in judging reputation?

Q2.4 Did they use any of these reputational measures (above) in their CVs?

Q2.4.1 Or, are considering doing so?

Q2.5 Do they consider citation-based metrics helpful in assessing the wider **usefulness** of their work or that of others?

Q2.5.1 Do they consider download data, social media indicators/ alternative indicators (i.e., altmetrics) helpful in assessing the wider **usefulness** of their work or that of others?

Q2.6 Do they consider download data, social media indicators/ alternative indicators (i.e., altmetrics) to have a **reputational** value for them or others?

Q2.7 Have their views on citation metrics and altmetrics been influenced by the current situation, where COVID-19 research has brought to the fore importance of rapid, informal ways of knowledge-sharing?

Q2.8 Achieving visibility for their research outputs is argued as being important in building research reputation: do they agree?

Q2.8.1 If yes, how do they achieve maximum visibility for their research outputs? Do they use any in this list?

- a) Tweeting a link
- b) Putting on a social scholarly platform; [*Prompt for ResearchGate and LinkedIn if not mentioned*]
- c) Placing in a virtual poster where the article is summarised;
- d) Giving a presentation at a conference, seminar or workshop (including virtual) where the article is referenced
- e) Preparing an infographic or a video abstract for those publishers who use such things and/or your group or personal website
- f) Writing in a professional magazine/research newsletter
- g) Blogging
- h) Other methods (please specify)

Q2.8.2 Are there other ways in which they use social media professionally and if so, explain further

Q2.9 Has the pandemic changed their visibility-achieving practices in any way?

Q2.91 Argued there is a need to improve the ways in which scientific research output is evaluated by funding agencies and academic institutions by the taking into account openness and transparency factors, such as OA, open data and outreach. What are your views on such a policy?

Q2.93 Has the pandemic changed their views on this in any way?

3 General communications practices

Information discovery and information usage

Q3.1 Where do they go to **search** for formal scholarly communications? List in order of importance.

Q3.1.2 If the documents cannot be obtained easily (through their library/virtual network?) where do they go next? Listed in order of importance. [*if not mentioned, prompt for Sci-Hub and see what is said*]

Q3.1.3 Has their practice changed since the pandemic?

Q3.1.4 If relevant for them, where do they currently search for early-stage/interim research results and/or data and/or code and/or related outputs?

Q3.1.5 If so, where do they find them?

Q3.1.6 Is this any different from what they did pre-pandemic?

Q3.2 Do they use smartphones to search for/find formal scholarly information, such as full-text papers?

Q3.2.1 If so, do they read them on the smartphone or do they do that on another device?

Q 3.2.2 If so, is this particular way of working a regular or occasional practice?

Q.3.3 If relevant, do they have any scholarly apps on their smartphones (i.e., ResearchGate app; Researcher-app)?

Q3.3.1 Are they using smartphones for scholarly purposes more since the pandemic?

Sharing/connecting

Q3.4.1 In what ways do they share/disseminate their ideas and their early stage/interim results?

Q3.4.1.1 If not raised above, do they share their ideas and/or early stage/interim results over general social media channels, such as Instagram, Twitter, Facebook and LinkedIn?

Q3.4.1.1.1 Is this any different from what they did before the pandemic?

Q3.4.1.2 If not raised above do they share their ideas and/or early stage/interim results through scholarly social networks/social media, such as ResearchGate and Academia.edu?

Q3.4.1.2.1 Is this any different from what they did before the pandemic? see previous question

Q3.4.1.3 If not raised above, do they share their ideas and/or early stage/interim results through participating in conferences, including virtual ones?

Q3.4.2 What other purposes does participation in conferences serve for them?

Q3.4.2.1 What are the advantages and disadvantages for them of the pandemic-induced shift to virtual conferences as compared to face-to-face ones?

Q3.4.2.2 To what extent does the virtual conference take the place of face-to-face ones?

Q3.5.1 How do they currently go about forming ties with their fellow researchers?

Q3.5.2 How do they currently maintain these ties?

Q3.5.3 Do these behaviours differ from their behaviours in pre-pandemic times?

Q3.5.4 If so, are these new behaviours as effective/more effective/less effective? In what ways?

Information evaluation and trust

Q3.6 When they have searched and found an article on a topic important to their research what criterion persuades them to read it:

[On a scale of 0 as no importance to 5 as very high importance ask interviewee to rate these characteristics]

a) the name/reputation of the author

b) the type of peer review process which the article has undergone

c) the editor of the journal and members of the editorial board

d) the name of the journal

e) the name of the publisher

f) abstract

g) journal impact factor

Q3.7 To what extent do they feel that the peer review system vouches for the quality and trustworthiness of formally published research?

Q3.8. How do they decide how to trust informally disseminated evidence in their own specialisms?

- a) blog posts
- b) posters
- c) other modes of informal dissemination (please specify)

Scholarly integrity

Q3.9 Are they aware of bad science/questionable practice being undertaken in their field and subsequently published?

Q3.9.1 If so, do they think this has become a more frequent behaviour during the period of the pandemic?

Q3.9.2 If so, do they think the pandemic is responsible for this?

4. Authorship and publishing

Q4.1 Does their research team/department/university have a clear authorship policy?

If known, is it in respect to the order of authors? If so, what is it?

If known, is it in respect to who should be included as authors? If so, what is it?

Q4.1.1 Are these policies changing, and if so, as a consequence of the pandemic

Q4.1.2 If it were up to them, would they change the policies and, if so, how?

Publishing

Q4.2.1 Do they see traditional journals, whether or not open access ones, as still the main way of making their research available?

Q4.2.2 Do they think more informal modes of communication (e.g., preprints, tweets, blogs) now play a larger role?

Q4.2.2.1 If yes, is it true of their own specialism?

Q4.2.2.2 And of their own practices?

Q4.2.2.3 Whether saying yes or no, (above) what is the explanation for their view?

Q4.2.3 Do they think that informal modes of communication will be playing a greater role in the future? Whether yes or no, why?

Q4.2.4 Is this a trend for which the pandemic is responsible?

Q4.3 When choosing a journal to submit their paper to which factors rate most highly:

[Score on a scale 0 as no importance to 5 as high importance]”

- a) it is a high impact factor journal
- b) it has much prestige in the discipline
- c) appropriateness of the audience
- d) the speed from submission to publication
- e) it is open access
- f) the geographical location/origins of journal/publisher
- g) where it is indexed (e.g., SCOPUS, Web of Science) [we are aware of overlap with a) above]
- h) high standards of peer review

Q4.3.1 Is the pandemic likely to change their relative ratings?

Peer review

Q4.4.1 Are they involved in responding to criticisms of their/their groups' publications?

Q4.4.2 Have they done peer review themselves?

Q4.4.3 Have they had any formal and/or informal training for these roles and, if either, please specify?

Q4.5 Do they feel that the peer review system needs improving in any way?

Q4.5.1 If so, would double blind, defined as author blind to reviewer, and reviewer blind to author, improve things?

Q4.5.2 If so, would the use of Open Reports, where the full content of the reviewer report is published along with the name of the reviewer (Open Identities), improve things?

Q4.5.3 If so, are there any other ways that would improve quality of peer review?

Q4.6. Do they think the pandemic is changing the peer review process? If so, in what ways and for what reasons? **Prompt for change regarding the time spent on the process.**

Open access publishing

Q4.7. Does their research team/department/university have a policy in regard to OA publishing? If yes, what is it?

Q4.7.1 Does their research team/department/university have a policy on avoiding predatory journals? If yes, what is it?

Q4.8 Can they/their group afford to publish in open access journals, which are entirely open access – so called gold journals? And in journals which are mostly not open access – so-called hybrid journals?

Q4.8.1 If so, where does their money come from for this? Please specify name of funder if known.

Q4.9 Is the final peer reviewed version of their article placed in a repository in their own institution and if so, why?

Q4.9.1 Is the final peer reviewed version placed in a general subject repository and if so, why?

Q4.9.2 If not, why not (in in either case)?

Q4.10 Do they know of open access publishing platforms where they can publish all their findings, including null results, data notes and more, both as preprints and as peer reviewed articles? These are favoured and produced by some funders. To illustrate use this example: <https://wellcomeopenresearch.org/>

Q4.10.1 *If so, do they see them as taking over from traditional journals? If yes, why? If not, why not?*

Q4.11. *It has been suggested that one result of the pandemic might be to accelerate the increased take-up of open access publishing and open science in general. Do they think this could/has happened?*

Open data/scholarship

Q4.12.1 Have they produced data as part of their research?

Q4.12.1.1 If yes, were they allowed to release it and if so, can they answer the following questions:

- 1 Do they regard these as outputs to be valued separately from their publications?
- 2 Do they prefer to keep them with the related publication as “additional content” or “supplemental material”?
- 3 Are they being asked by (*their funder, conference organiser, editor or reviewer*) to deposit them in a recognised specialist repository?
- 4 Do they like the idea of sharing their research data or tools created for it? Whether yes or no, why?

5 Has the pandemic changed in any way their attitude to the practice?

Q4.12.2 Have they produced software as part of their research?

Q4.12.2.1 If yes, were they allowed to release it and if so, can they answer the following questions: Do they regard these as outputs to be valued separately from their publications?

- 1 Do they prefer to keep them with the related publication as “additional content” or “supplemental material”?
- 2 Are they being asked by (their funder or conference organiser) to deposit them in a recognised specialist repository?
- 3 Do they like the idea of sharing their ~~software research data or tools created for it~~? Whether yes or no, why?
- 4 Has the pandemic changed in any way their attitude to the practice?

Q4.13. Do they do anything concrete to provide sufficient information about the way they did their experiments for reproducibility/replication to be possible?

Preprint servers

Q4.14.1 In fields where research is related to the pandemic there has been a marked increase in the use of preprint servers. Is this happening in their own specialism/for their own research, whether the research is pandemic-related or not? Probe the answer for reasons why, why not.

Q4.14.2 Do they consider a preprint to be: a) an alternative to; b) a replacement for a traditional publication? Whether yes or no, why?

Q4.15 As stated earlier, making available research results quickly and openly can be at the expense of quality and reproducibility and it is argued that there is evidence for this in the number of retractions of preprints and final versions of papers.

a) Have any researchers you know retracted a paper?

b) Have any editors or publishers you know retracted a paper?

Outreach

Q4.16.1 Are they expected/mandated by funders or government/institutional authorities to make their research comprehensible to researchers in fields other than their own, or to policy makers, industry, citizens etc? If yes, how do they go about it (platforms/media used) and which audiences are targeted?

Q4.16.1.1 If not, do they do it nevertheless? If so, what methods/platforms are used and what audiences targeted?

Q4.16.1.2 Do you think the pandemic has encouraged such outreach activities?

5 Transformations

Q5.1.1 During their academic career has their attitudes to established scholarly communication practices largely based on traditional journals, changed?

Q5.1.2 If so, in what way and why?

Q5.1.3 Do they think there have been more changes because of the pandemic? If so, any examples?

Q5.2 Do they think that there is a big opportunity now for the current generation of researchers to fundamentally change the way in which the scholarly communication system works?

Q5.3 What form do they think a transformed scholarly communications system might take?

Q5.4 Have they taken any personal action to promote change of any kind?

Q5.5.1 Do they think that journals will still have a central role to play in ten years' time?

Q5.6. What role will libraries have for researchers in ten years' time as compared to their current role?

6. Final overarching reflection

Q6. Reflecting over the last two years when we have been interviewing you, do you think that the pandemic has led to any long-lasting or permanent changes to the **general** conduct of research and scholarly communications? [a sentence or two will do]

Anything else about the pandemic we have missed that you would like to raise