

EARLY CAREER RESEARCHERS: THE HARBINGERS OF CHANGE?

Harbingers Working Report 3, CIBER, August 2016

Comparative national
findings (2016)

Harbinger study detailed early findings

Interviewers for each country provided a bulleted summary of their key findings. One hundred and twenty or so findings resulted and these were rationalized (duplicates removed), and integrated into a single list. Then each country was given the opportunity to agree (or not) with the findings raised by other countries in order to see whether consensus and real differences lay. For the purposes of this report the list was whittled down to just those statements obtaining agreement from a minimum of four out of the seven countries, that is those obtaining a majority agreement. The list can be found in Table 1 where there is also provided a country breakdown. A word of caution, this analysis is meant to provide a bridge to the more detailed analyses that will be conducted on the 7 national reports.

In general, there was a high level of agreement for more than 50 statements, with over half (28) obtaining universal support (from all seven countries) and the 28 are worth listing here:

[Job and career]

- Most ECRs are driven by their interest. They regard an academic life as an ambition. At the same time, they complain about low income and heavy burdens. In spite of the complaints, no one ever wants to quit.
- They must love research as they have badly paid jobs
- ECRs are very productive and have excellent CVs, but the environment in which they exist is precarious. However, there is not a big drop-out rate and all want to remain researchers

[Diversity]

- There are no differences between genders in the way they see their career progression
- Their future very dependent on the importance of the research group to which they belong
- ECR scientists, in comparison to their social science counterparts, are generally more productive, collaborative and active.

[General scholarly communication behavior]

- Not everyone knew about the scholarly practices of their mentors, but the assumption was that their practices were the same as described by the interviewees, except in regard to social media, sharing etc.
- They know and practice the scholarly rules (publishing many articles in high impact factor journals, as first author), but at the same time they are convinced that the rules work only if they produce good and innovative research.

[Publishing]

- JCRs and publishing in the Q1 journals are the priorities for ECRs.
- Questions about publication strategies produced evidence of quite ruthless planning to enable continuance of research

[Open access]

- ECRs see advantages of obtaining a bigger reach through OA publishing, but think it too expensive
- Archiving their research is a non-priority; they see this as job of librarians or research officers
- Almost all ECRs approved of open access, which meant gold open access

[Peer review]

- ECRs are positive about peer reviewing. They have some propositions to improve it, but fundamentally, they are satisfied.
- ECRs believe blind reviewing is not as blind as it should be and reviewing should be paid for or count towards reputation

[Metrics and reputation]

- Metrics are important because of highly competitive environment in which they find themselves
- Citations are of great value to them, not social media and usage metrics
- Altmetrics do not contribute towards reputation

- More concerned with traditional metrics than Altmetrics
- Believe that researcher who work in big groups have a reputational advantage
- Although they all admit the importance of the social media to facilitate communication, they rely on peer reviewed journals to build their reputation

[Social media]

- ECRs use social media passively, mostly ResearchGate
- Did talk about sharing and almost all knew about and are at least registered on ResearchGate, but few used the sharing mechanisms
- ECRs do not collaborate on social scholarly sites.
- Will not cite social media. Don't release their findings or data on the social media.

[Sources of information]

- Only electronic journals and virtual libraries merit their consideration

[Transformations]

- They know the importance and necessity of changing. Due to their humble and lower positions, they cannot impact on the current system. So they adopt a negative attitude on short-term change. However, they are positive to the long-term systematic reform.
- Many felt there was an opportunity to transform scholarly system through open science etc., but few had a view of what a transformed system might look like or what would make them happy

Table 1: key findings for the 7 case study countries

KEY

Y	indicates agreement with the statement and a Y in red indicates the country that gave rise to the statement	Brown	Very strong agreement (at least 6 countries in agreement)
N	indicates that the data does not support it;	Yellow	Strong agreement (5 countries in agreement)
O	means don't know or not sufficient data	Blue	Mild agreement (4 countries in agreement)

KEY FINDINGS	CH	FR	ML	PL	SP	UK	US	NOTES
GENERAL JOB AND CAREER								
Most were not happy with the system (they were slaves to the system), but most of them were happy or very happy with their mentors and slightly fewer with training etc.	Y/N	Y	Y	Y	Y/N	Y	Y	In Spain only some happy with mentors. In China ECRs from research intensive universities happier.
They must love research as they have badly paid jobs	Y	Y	N	Y	Y	Y	Y	For China prestige and flexibility of working big factors, too
They call themselves "Green Peppers" as self-mockery ('green' meaning new and naïve) and want more time and resources for future growth	Y	Y	N	Y	Y	O	O	
ECRs think of a career in academia as the obvious outcome of their PhD qualification. They believe PhD is a passport to job mobility	Y/N	Y	Y	Y	Y	O	O	In China PhD not enough for starting academic career; post-doc or overseas degree also

								needed. For US/UK the second sentence is a YY
Getting a job is the major motivation, not changing the world/science.	Y/N	N	Y	Y	Y	Y	Y	US/UK did not see these two motivations as alternatives
ECRs are very productive and have excellent CVs, but the environment in which they exist is precarious. However, there is not a big drop-out rate and all want to remain researchers.	Y	Y	Y	Y	Y	Y	Y	
DIVERSITY								
The older they are the more collaboratively they work	Y	Y	O	Y	O	Y	Y	
There are no differences between genders in the way they see their career progression	Y	Y	Y	Y	Y	Y	Y	Note in UK/US difficult to ask this question
ECR scientists, in comparison to their social science counterparts, are generally more productive, collaborative and active.	N	Y	Y	Y	Y	Y	Y	Different KPIs for sciences & non-sciences in Malaysia
With the exception of ECRs from physics, computer science and LIS, know little about OA, Science 2.0 and open data.	Y	N	Y	N	Y	Y	Y	In Spain's case, LIS are the only exception
ECRs who have reviewing experience hold different scholarly views from those who don't	Y	Y	Y	N	Y	O	O	
Most ECRs have overseas study or research experience, many have studied in foreign countries, and some have PhDs from overseas universities	Y	Y	Y	N	Y	N	N	In UK/US about 40% originated in other countries, but few had PhDs
There are significant differences between those who work more or less on their own, usually doing a doctorate after preliminary experience and those who are embedded in groups.	Y	Y	O	N	Y	Y	Y	
Their future very dependent on the importance of the research group to which they belong	Y	Y	Y	O	Y	Y	Y	
GENERAL COMMUNICATION BEHAVIOUR								
ECRs follow their mentors, adopting their practices	Y	N	Y	Y	O	Y	Y	

Not everyone knew about the scholarly practices of their mentors, but the assumption was that their practices were the same as described by the interviewees, except in regard to social media, sharing etc.	Y	N	Y	Y	Y	Y	Y	
ECRs are very productive and have excellent CVs, but the environment in which they exist is precarious. However, there is not a big drop-out rate and all want to remain researchers.	Y	Y	Y	Y	Y	Y	Y	
They know and practice the scholarly rules (publishing many articles in high impact factor journals, as first author), but at the same time they are convinced that the rules work only if they produce good and innovative research	Y	Y	Y	Y	Y	Y	Y	In US/UK a number felt good science to be more important than pubs
Most ECRs are driven by their interest. They regard an academic life as an ambition. At the same time, they complain about low income and heavy burdens. In spite of the complaints, no one ever wants to quit.	Y	Y	N	Y	Y	Y	Y	
AUTHORSHIP, PUBLISHING, OPEN ACCESS & PEER REVIEW								
Questions about publication strategies produced evidence of quite ruthless planning to enable continuance of research	Y	Y	Y	Y	N	Y	Y	
There were problems, sometimes serious, over authorship practices being uncongenial.	Y	N	Y	N	Y	Y	Y	
JCRs and publishing in Q1 journals are the priorities for ECRs	Y	Y	Y	Y	Y	Y	Y	
It is becoming more and more difficult to publish in high ranked journals, so publishing research is a long process as you have to try several journals	Y	Y	Y	O	Y	O	O	
ECRs see advantages of obtaining a bigger reach through OA publishing, but think it too expensive	Y	Y	Y	Y	Y	Y	Y	
Archiving their research is a non-priority; they see this as job of librarians or research officers	Y	Y	Y	N	Y	Y	Y	
Almost all ECRs approved of open access, which meant gold open access	Y	Y	Y	O	Y	Y	Y	
Open Access is always understood as Gold open access, the green road is not considered, or confused with social media depositing (on ResearchGate, for instance).	Y	Y	O	O	Y	Y	Y	
General absence of knowledge of and interest in repositories to the extent that a significant number did not even know that their institution had one.	Y	Y	O	N	Y	Y	Y	
ECRs are positive about peer reviewing. They have some propositions to improve it, but fundamentally they are satisfied.	Y	Y	Y	Y	Y	Y	Y	

ECRs believe blind reviewing is not as blind as it should be and reviewing should be paid for or count towards reputation	Y	Y	Y	O	Y	Y	Y	
Suggestions for improved peer review include authors and reviewers should be in contact to solve doubts or misunderstandings during the process and reviewers should be identified	Y	Y	N	Y	Y	N	N	
Peer review fails in reviewer selection, frequently they are not specialists in the paper subject	Y	Y	O	O	Y	Y	Y	
SOURCES OF INFORMATION & PLATFORMS								
ECRs read mainly on screens, but not on smartphones	Y/N	Y	N	Y	Y	Y	Y	US/UK use smartphones away from desk mainly
None of them mentioned SciHub as a source of articles.	Y	N	O	Y	Y	Y	Y	
Many mentioned PubMed	N	Y	Y	N	Y	Y	Y	In US/UK main source just for medics
Only electronic journals and virtual libraries merit their consideration	Y	Y	Y	O	Y	Y	Y	
METRICS, REPUTATION & EVALUATION								
Citations are of great value to them, not social media and usage metrics	Y	Y	Y	Y	Y	Y	Y	
Metrics are important because of highly competitive environment in which they find themselves	Y	Y	Y	Y	Y	Y	Y	
Altmetrics do not contribute towards reputation	Y	Y	N	Y	Y	Y	Y	
More concerned with traditional metrics than Altmetrics.	Y	Y	Y	Y	Y	Y	Y	
Believe system of reputational assessment not perfect but cannot think how to change it, except by obtaining a more comprehensive evaluation of scholarship.	Y	Y	Y	Y	Y	Y	Y	
Believe evaluation system is relatively fair, though it has set a high standard, which is difficult to attain. To some extent, they are “slaves” of publishing and the system.	Y	N	Y	Y	Y	Y	Y	In US and UK many feels slaves but also self-imposed
Have to adapt to existing system in spite of not agreeing with it.	Y/N	N	Y	Y	Y	Y	Y	
Complaints about differences between fields in regard to the time and difficulty of obtaining results and then publishing them. Needs to be acknowledged	Y	Y	Y	Y	Y	O	O	

Believe that researcher who work in big groups have a reputational advantage	Y	Y	Y	O	Y	Y	Y	
Although all admit to importance of the social media in order to facilitate communication, they rely on peer reviewed journals to build their reputation	Y	Y	Y	Y	Y	Y	Y	
Metrics are important because of the assessment system in academia – collecting points/scores (for publishing in excellent journals and others academic activity) is a necessity.	Y	Y	Y	Y	Y	N	N	This is not the system in UK or US.
SOCIAL MEDIA AND ONLINE COMMUNITIES								
ECRs use social media passively, mostly ResearchGate	N	Y	Y	Y	Y	Y	Y	
Did talk about sharing and almost all knew about and are at least registered on ResearchGate, but few used the sharing mechanisms	N	Y	Y	Y	Y	Y	Y	
ECRs do not collaborate on social scholarly sites.	Y	Y	N	Y	Y	Y	Y	
Will not cite social media. Don't release their findings or data on the social media.	Y	Y	Y	Y	Y	Y	Y	
TRANSFORMATIONS								
They do not have time/need to think about it because they are overloaded with (too) many responsibilities	O	N	Y	Y	Y	Y	Y	
Many felt there was an opportunity to transform scholarly system through open science etc., but few had a view of what a transformed system might look like or what would make them happy	Y	Y	N	Y	Y	Y	Y	There were a small minority in US/UK who had transformative views
New behaviours not really taking hold while academics are recruited, promoted and obtain funding on the basis of their publication record and citation scores	Y	Y	O	Y	Y	O	O	Maybe case in US/UK but no-one actually said this
Know the importance and necessity of changing. Due to humble and low positions, cannot impact on the system. So adopt a negative attitude on short-term change, but positive to long-term reform.	Y	Y	Y	Y	Y	Y	Y	Feel need to have a "postition" to change the system.
Small signs of change: a) those who did not use social media regularly used the words "not yet" often accompanied by the word "should"; b) similarly, the use of the words "transparency" and	N	Y	O	Y	Y	Y	Y	

"sharing" were mentions as future decision actions; c) acceptance of the idea that they might change something when in power

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