

AuthorAID helps Southern researchers to publish

In-depth, independent study reveals positive impact of AuthorAID approaches to developing research-writing capacity

Since 2007, INASP's AuthorAID project has been working to support developing-country researchers to communicate their research more effectively. A new independent evaluation of three main aspects of the project – mentoring, large-scale online courses and intensive courses – has revealed that each intervention has a positive impact on researchers' ability to publish their research and also on their overall confidence and research connections. It also revealed that different approaches suit different audiences.

Whether it is combating climate change, tackling disease,



Agricultural Extensionist/Rural Sociologist and MOOC participant Olufemi Adesope, with graduate and undergraduate students, demonstrating the use of high-quality cassava flour for snack making to young people in Nigeria

designing new building materials or undertaking urban planning, research has a vital role to play in development, and research from the Global South is essential for solving these development challenges. However, researchers in the developing world face many challenges in publishing their research. These include: lack

of research funding; difficulties writing in English; challenges in identifying the most suitable and genuine journals; delays with peer review and paper acceptance; publication costs; lack of mentors to check and review manuscripts; and lack of familiarity with academic writing style.¹

Key findings from AuthorAID impact study

- Capacity development through all three of the approaches studied is effective, and there is evidence of impact
- Over 85% of survey respondents reported a positive effect on their understanding of the publishing process
- All capacity development approaches had an impact on publication outputs:
 - 56% reported that AuthorAID helped them to publish
 - 39% published at least one paper in a peer-reviewed journal following involvement with AuthorAID
 - 82% reported a positive effect on confidence
- The group most likely to publish: intensive course participants

The report of the study can be found at www.inasp.info/authoraidstudy.





MOOC participant Conrad Simoben Veranso of Cameroon is currently a PhD student in Germany where he is researching natural products inhibitors and modulators of epigenetic targets in anti-malarial drug discovery

These challenges lead to a disparity between publication rates, and therefore level of influence in global research. Globally, only 27% of researchers are in the Global South – and only 1.1% of published papers come from Africa.² But some of the world's biggest problems occur in the developing world, as does much of the vital contextual knowledge to address them.

The AuthorAID project from INASP sets out to help address the challenges faced by researchers in

communicating their work through a range of approaches.

Throughout the project's 10-year history, project evaluations³ and anecdotal feedback from participants have shown the positive impact of AuthorAID. Now, a decade into the project, we have commissioned a much more in-depth, independent study of the impact of three of the main approaches used in the project between 2013 and 2016. This is intended to both guide future direction and contribute to the global body of knowledge on the effectiveness of developing research capacity in the Global South.

The first of the approaches studied is the Massive Open Online Course in Research Writing (MOOCs), which started in 2015. AuthorAID's English-language MOOCs are run twice a year and attract thousands of researchers.⁴ The study also included two smaller online courses, which we called mini-MOOCs. These took place in 2014 to pilot the approach of using online courses to develop research writing skills.

**“I think that [the AuthorAID online courses] helped me know more about [what] we were supposed to be doing. I am now more aware of what not to do.
Interviewee, India**

The study

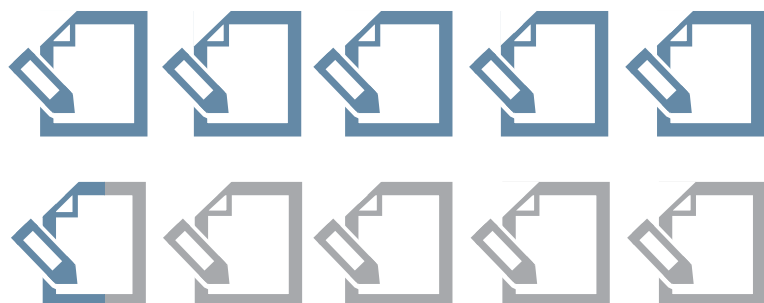
The AuthorAID capacity development impact study was undertaken between February and June 2017, with the following objectives:

1. To compare the success rate for three distinct AuthorAID capacity-development approaches in supporting early-career researchers to publish
2. To explore which type of AuthorAID capacity development approach works best for whom
3. To contribute to INASP's evidence base of capacity development in research

A multi-methodology approach was adopted, incorporating internal documents and literature reviews, participant observation, a large-scale online survey and targeted in-depth interviews with a small number of participants. The survey was completed by 1,126 participants (896 MOOCs, 149 mentees, 24 who had taken part in an intensive course, and 57 multiples who had taken part in different combinations of courses). 100 individual countries were represented. A total of 13 in-depth interviews were conducted via Skype and email, with respondents from Nigeria, Tanzania, Somalia, India and Nepal, to explore key issues arising from the survey. The interviews explored what facilitates or acts as barriers to successful academic career progression and publishing, and provided contextual insights.



56% of survey respondents reported that AuthorAID has helped them to publish



The second approach is the Research Writing in Environmental Health course (called 'intensives' in the study), which has a focus on a specialized subject and involves a smaller number of pre-selected

The AuthorAID project

AuthorAID is a free, pioneering global network that provides support, mentoring, resources and training for researchers in low- and middle-income countries.

AuthorAID provides support through mentoring, online training and opportunities to network with other researchers. Via the AuthorAID platform, a network of currently 17,000 researchers in low- and middle-income countries can connect with mentors, mentees and collaborators and get support to publish and communicate their work.

AuthorAID also works directly with Southern universities and institutions to build local capacity.

www.authoraid.info

participants. The courses in this study focused on the area of environmental health and are run annually over eight to 10 weeks in partnership with Pure Earth.⁵

The third area, the AuthorAID mentorship scheme, connects mentees with mentors who can provide support on research writing and other tasks. This uses the AuthorAID platform to manage connections and tasks (such as advising a mentee on a paper or revising a presentation with mentor support).⁶ This platform also awards badges for tasks completed. There are currently around 10,000 mentees and around 500 mentors registered on the system and in 2016 there were 140 mentoring tasks completed.

Long-term capacity development is effective

The study looked at the impact of these approaches in three main ways: publication output, confidence and other benefits such as networking. It used both quantitative and qualitative methods.

The study revealed that all AuthorAID capacity-development approaches examined have a positive impact on publication outputs and research communication skills. The study also showed that the different capacity development approaches address the same topic in different ways, and so may suit the needs of participants at different stages in their career and at different points in the research-writing process.

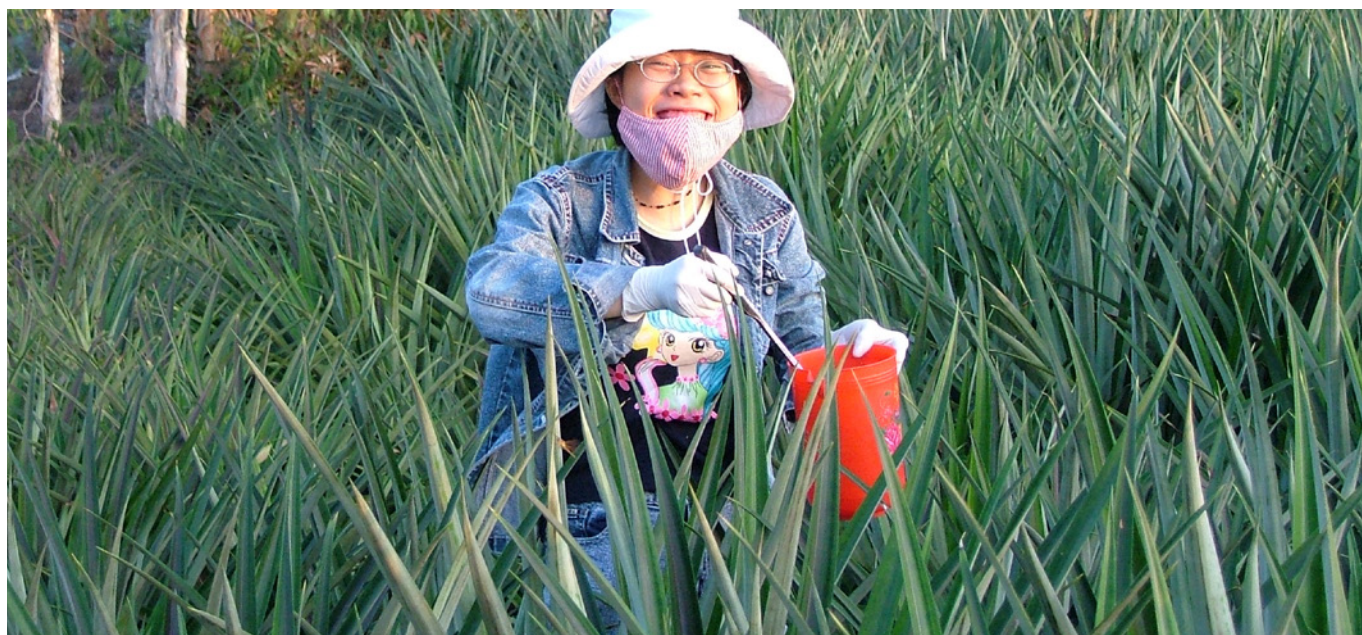
Impact on publications

Publishing in peer-reviewed journals was perceived as being central to career development in academia and research for 92% of survey respondents. However, we identified a number of barriers to publication success. These include: lack of data analysis skills, limited writing skills, bias in journals and teaching workload (all identified by over 30% of survey respondents).

The in-depth interviews further revealed that national policies that limit funding for higher education result in a lack of infrastructure and equipment necessary to conduct scientific research, which forms the basis of any publication. Lack of funding also negatively impacts the ability of researchers to network and communicate their work at scientific gatherings, such as conferences and workshops.

Against this backdrop of challenges, the impacts of AuthorAID interventions are particularly encouraging. Overall, 56% of survey respondents reported that AuthorAID helped them to publish and 39% of survey respondents had published at least one paper in a peer-reviewed journal in the period between





Thoa Tran of Vietnam, conducting experiments in a pineapple farm, treating apical meristem for flowering. She was a participant in a recent AuthorAID MOOC

their involvement with AuthorAID and March 2017. The group most likely to have published in that period were participants from the intensive course (67%) followed by mentees (60%), and MOOC course participants (34%).

Publishing within a fixed period of one year following involvement with AuthorAID showed a similar pattern, with intensive course participants being most likely to publish within one year (59%), followed by mentees (53%) then MOOCs (36%). At the time of the study some people had completed their AuthorAID activity less than a year before.

When the study controlled for age, gender, geographical region, academic qualification and prior publication record, mentees are more likely to have published within a year compared to participants of any of the other activities. In addition, prior publication record was the strongest single determinant of

publication and participants with a PhD are significantly more likely to publish within a year compared to those with a Bachelor degree.

These results present an encouraging picture of AuthorAID impact on publication. We should also note that there are long research publication lead times, so immediate results (in terms of publication output) are not to be expected.

Considering the other challenges Southern researchers face and the fact that many respondents had only recently finished AuthorAID activities and may not have had a paper in process at the time makes our impact study results even more impressive.

Confidence

The study also asked about perceived impact of involvement with AuthorAID in several areas including confidence, understanding of the publishing process, publication preparation,

preparation of other materials, originality and quality of work.

Interviewees reported that engagement with AuthorAID improved their understanding of the publishing process.

While MOOC participants did not publish as much as participants in other AuthorAID activities, they reported the highest perceived impact (confidence, understanding of the publishing process, quality and originality of research). This seems to be broadly true regardless of the specific MOOC course taken. Mentees, who were the second most successful in publishing (after intensive course participants), reported the least perceived impact of AuthorAID activities.

The interviewees also mentioned improved resilience to rejection. They said that AuthorAID has given them encouragement to rework their papers if they had been rejected.

“So, it’s getting some structural and academic-type things from the course, and it’s applying it practically in my one paper in the mentoring programme. It’s a good combination, I think, because you learn practically as well as all the principles.”

Interviewee, Nepal

Making connections

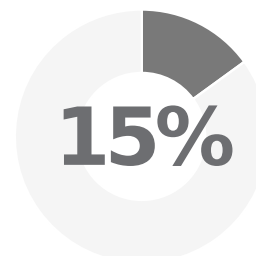
In addition to achieving the key goal of supporting publication outputs and improved confidence in research communication skills, there are other benefits of the AuthorAID approaches.

The study – and other feedback – have shown the benefits of our MOOCs for community building. The survey revealed that 10% of the participants who responded to the survey have gone on to collaborate with people they have met through the course. AuthorAID MOOCs are also cross-disciplinary so this has potential benefits for wider sharing of ideas and experiences.

AuthorAID MOOCs meet researcher needs in low or middle income countries



AuthorAID Massive Open Online Courses average completion rate



Massive Open Online Courses normal maximum average completion rate⁷

The social aspect and opportunity to interact with peers emerged as a positive effect of engaging with AuthorAID. This was explored further in the in-depth interviews. Peer support at work and online was identified as a major contribution to publishing. The ability to communicate research at international conferences and to take part in fellowship and exchange programmes in different countries were also seen as key to a successful research career. This fits with another aspect of the AuthorAID project that was outside the scope of this study: AuthorAID has also provided grants that enable researchers to attend international conferences to present their work.

Different approaches for different situations

The study found that MOOCs are particularly effective for early-career researchers or those at an introductory level although they also have value as ‘refreshers’ for more experienced researchers. The perceived impact of MOOCs by the learners in terms of confidence, understanding of publishing

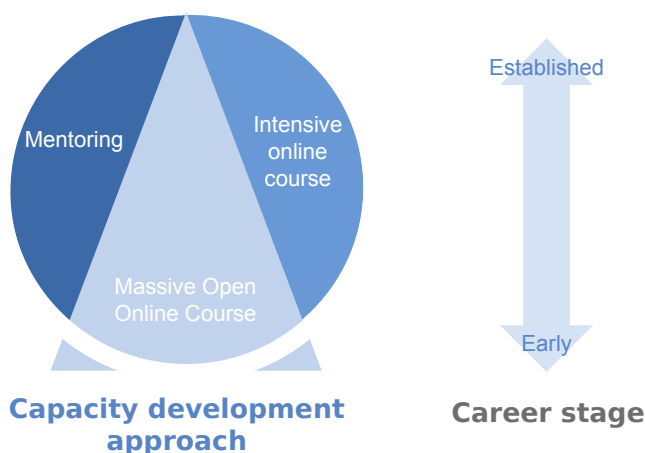
process, quality and originality of research is particularly significant. Of the three approaches studied, MOOC participants perceived the biggest impact.

This study found that intensive courses have the most impact on publication outputs (67%). Participants are pre-selected based on relevance to the topic and having a paper already in progress. However, the sample size in this case is smaller than for the other two approaches. This approach demonstrates the effectiveness of delivering a good intervention at the right time. Unlike the cross-disciplinary MOOCs, the subject-specific intensive courses enable more tailored assistance.

Mentoring works best for those researchers with more experience and for those who already have a paper in progress and need specific support. This is reflected in the high publication output (60%) within a year of the intervention. Mentoring has the broadest scope of the AuthorAID capacity-development approaches studied because the remit of the activity is defined by the mentee. Probably due to this self-led learning nature,



Capacity development impact is achieved by delivering a good intervention at the right time



the perceived impact reported by mentees is lower than for intensive course or the MOOCs.

Mentoring is particularly significant in terms of creating peer-to-peer learning. In addition, mentors are from both north and south and some Southern mentors were previously mentees, demonstrating capacity development. Another interesting aspect of the mentoring system is the extent to which people return to the same mentor for advice, or go back to find new mentors for different bits of work. While this wasn't a focus of this study, we do hear anecdotal evidence to that effect, showing

the flexibility in the mentoring approach as compared to online courses. As with the intensive courses, because mentors are paired with others in the same subject area and agree actions on a case-by-case basis, mentoring enables tailored assistance.

Combining approaches

A small number of survey participants had been involved in multiple activities. No statistical evidence was found that doing multiple activities of the same kind, or combinations of different activities, resulted in either more

publications or a greater amount of publishing-related activity.

However, the interviewees who had taken part in multiple AuthorAID activities believed that they benefitted from each activity in a different way. For example, the combination of a MOOC and mentoring provided researchers with a theoretical orientation followed by practical application of their learning under the guidance of a more experienced individual. Similarly, those who took part in a MOOC and intensive course believed that the MOOC gave them a broad understanding while the intensive course provided them with an in-depth understanding focused on environmental health (the specialist area of the course).

Gender and country context

Tackling gender inequality in higher education is a priority for INASP⁷ and we have put effort into attracting more women to participate on the courses and in mentoring. AuthorAID has successfully increased the involvement of women in terms of registration, and numbers of female facilitators and mentors. We have also seen that women have higher MOOC/online course completion rates more than men.

“They have their one perspective based on their culture, their country, everything, and my perspective is different. So, it's quite good to know about their perspectives. When we interact with them we have some opportunity to learn out of the box, also.”

Interviewee, Nepal



Caroline Koech of Kenya doing analysis in her lab. Caroline was a participant on a 2017 AuthorAID MOOC

However, while it was generally accepted that gender was not an issue within the publication cycle per se., both men and women identified gender-specific barriers to developing a research career.

The survey data indicated that women were less likely to publish following an AuthorAID course than men (38% of women publish compared to 44% of men) and that the total amount of publishing-

related activity is lower for women. In addition, while most interviewees thought that being admitted to higher education and progress in academia and publications were judged purely on basis of merit, they conceded that women academics face more challenges than men. External/ environmental gender challenges mean that the confidence of women tends to be lower. They are often unable to publish as much

“Well, I would recommend [people] to take both [course and mentorship] because each has its advantages. You know, with the mentoring scheme, you have the opportunity to get better attention from an experienced individual. While the online course provides you with basics, general stuff. So, both – I would encourage people to take both. They will learn a lot from both.”

Interviewee, Nigeria

as their male counterparts due to a range of factors, including other demands on their time.

The results for researchers from fragile states are similar to those with gender and demonstrate that researchers in these contexts face additional challenges in publishing.



Recommendations

- **Social presence:** Our study showed that more could be done to increase confidence and other areas of perceived impact, especially among mentees. Further work might be done on creating a sense of 'social presence' specifically in the mentorship work; membership of a 'community' might afford added benefits.
- **Collecting course data:** If future work is to involve comparing outcomes between courses, it is important to incorporate comparable outcome measurements within each course and at equivalent time periods. Also, because publishing is often a process that takes considerable time, feedback should be collected from participants after suitable time periods.
- **Gender:** Gender-specific data for women and men should be collected. Gender-specific issues consistent with cultural context should be taken into account in the development and implementation of courses to ensure neither gender is disadvantaged.
- **Course content:** Time management was mentioned by many respondents and interviewees as a primary obstacle to their publishing. We therefore recommend that AuthorAID courses include more tips on how to create time to work on manuscripts.
- **Inter-activity promotion:** People who did multiple types of AuthorAID activity generally reported increased benefits. However, there was little awareness of other AuthorAID offerings for people who only did single activities. Our recommendation therefore is for AuthorAID to increase inter-activity promotion.
- **Inclusive feedback:** The present study only involves feedback from those who had successfully engaged with AuthorAID activities – it is equally (perhaps more) important to gather information from those who fail to complete courses, or get a mentor etc. to ensure optimal engagement.
- **Mentoring and MOOC for starters:** Previous publication experience was the strongest determinant of future publication success. We recommend that AuthorAID establish how to best support those who come to AuthorAID with no previous publication record. It seems that this group could especially benefit from mentoring or peer-mentoring activities.
- **Intensive courses for other disciplines:** Given the success of the intensive course format, it may be worth considering developing intensive courses for other disciplines.
- **Continue to learn from feedback:** Participants had strong and informed opinions about what they had most benefitted from and about what they required from AuthorAID activities. Furthermore, the publishing environment itself is in a continuous state of flux. Therefore, we recommend that AuthorAID continues to collect, analyse and learn from participants' experiences in order that courses are responsive to individual needs.
- **Develop better understanding of impact:** The existing AuthorAID activities focus largely on publishing research papers in peer-reviewed journals. However, the impact can also be seen in other areas of research and publishing activities. Developing ways of understanding impact and measuring the outcomes in these other areas will help in evaluating existing courses and developing new ones.



“Being a mother ... I have to attend to my family too so it is a problem. I find myself in a difficult situation sometimes – I don’t have time for publishing, I don’t have time for writing, sometimes I have to work maybe overnight or late nights so that I can accomplish my work.” Researcher, Tanzania

Conclusions

This study demonstrates that long-term capacity development of research communication skills through AuthorAID has a clear positive impact.

AuthorAID activities reach a wide range of different individuals in a variety of contexts. All activities produce results in terms of measurable publication output, wider-ranging publishing activity and perceived impact on improvement of skills and knowledge. Different course types are more suited to different individuals depending on their individual context and specific learning needs. This study has helped explore issues connected with producing publications. A series of recommendations (page 8) are made aimed at

improving course content, presentation format and eliminating the barriers identified by some early-career researchers.

As different approaches suit different purposes, there are opportunities to improve signposting of when specific interventions could be most appropriate for researchers.

The study also shows the importance of a supportive environment with mentors and facilitators who are engaged with participants. These approaches are part of a bigger capacity-development strategy at INASP focused on individuals, institutions and wider research systems.⁹

The report of the study can be found at www.inasp.info/authoraidstudy.

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The AuthorAID impact study was carried out by the independent consultants Zuzana Hrdličková and Gary Dooley

INASP team involved in this work:

Ruth Bottomley, Senior Programme Manager, Research Development and Support

Femi Nzegwu, Monitoring, Evaluation & Learning Advisor

Jennifer Chapin, Programme Manager, Research and Communication

Andy Nobes, Programme Officer, Research Development and Support

Christine Friis Laustsen, Programme Officer, Research Development and Support

