AuthorAID builds research-communications capacity in the global South

Improving skills and capacities in different ways

AuthorAID takes several different approaches to supporting early-career researchers in developing countries to communicate and publish their research. Here we consider three of those approaches - mentoring, online training and embedding research-writing courses within institutions. The most appropriate approach depends on a range of factors.

Important research is being conducted by researchers in developing countries that can inform local and international development challenges and policy and practice. However, researchers in these countries often struggle to get their research published and communicated to a wider audience. A lack of familiarity with the international publishing system and suitable journals, limited experience in writing scholarly articles, a scarcity of experienced academic mentors, and the need to write in English, often as a second language, all contribute to the challenges southern researchers face in getting their work "out there." Universities and research institutes in developing countries often do not provide courses to support research writing. They also often lack experienced trainers who could run these courses for students, faculty and research staff.

At INASP we believe in the value of research conducted in developing countries for finding local solutions to local problems and for national development. Our AuthorAID project builds the confidence, knowledge and skills needed by southern researchers and organizations so that their research can be published and communicated.

AuthorAID takes several approaches to capacity building. This Learning, Reflections and Innovation article will compare and discuss three of them:

About AuthorAID

AuthorAID is a wide-ranging project supporting southern researchers to gain the confidence, knowledge and skills needed for publishing and communicating their research through training, mentoring, networking and resources. The AuthorAID website (www.authoraid.info) is an online platform that provides advice, guidance and information resources to a wide audience. The site includes discussion forums, downloadable training resources and a mentoring system linking early-career with more experienced researchers.

The learning platform Moodle is used to provide online training in different aspects of research writing to small and large groups from across geographical boarders. In addition to this, AuthorAID awards grants to southern researchers to attend international conferences, to present papers, and to learn from others in their field. There are also grants for researchers to run local, face–to-face training and workshops for other researchers.

Recognizing that for skills development to be sustained there is a need for this support to be owned and driven by local universities and research institutions, for the last three years AuthorAID has also supported a number of universities and research institutions in Africa and Asia to embed research writing courses into their curricula and professional development programmes.

- A mentoring scheme to link early-career researchers with more experienced and published researchers;

- Support to universities and research institutions to establish and run research-writing skills courses for their researchers, faculty and students;

- Open online courses to train researchers in the research-writing skills needed to publish their research.

The analysis presented here is taken from a broader study that drew on data from the 2015 AuthorAID survey and analysed the different modes of support to understand their relative advantages and benefits in terms of efficiency, effectiveness and sustainability.

Mentoring support

AuthorAID's mentoring programme uses an online system to bring together early-career researchers from southern countries (mentees) with more experienced and published researchers (mentors). Mentors may come from northern or southern countries and a wide range of disciplines. Although

Group work on how to improve AuthorAID online mentoring at the AuthorAID annual meeting held in Sri Lanka at the end of 2015.

many are senior researchers and offer long-term mentoring support, others are editors, librarians, or non-governmental organization workers offering short-term practical support or, advice on specific aspects of a paper. The online, task-based system allows early-career researchers to find mentors in their chosen field, make contacts and establish the type of support required.

Tasks range from help on study design to editing a draft publication for language or logical flow. Communication, collaboration and support are done either

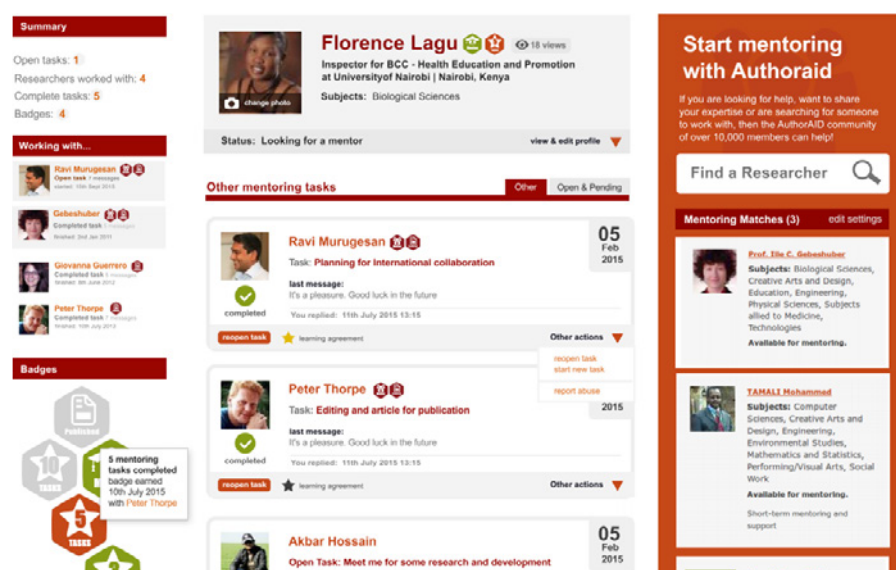through the online system or via email and other means.

The mentoring scheme is set up in a way that the more experienced and published researcher is able to provide direct support to the publication that the early-career researcher is working on. This is possible because the mentees approach mentors in the same research field and the mentor then formally agrees to support the mentee for the given task. The mentor provides her or his support on a voluntary basis. However, many of the mentors find the experience rewarding and

The AuthorAID community comprises more than 12,000 registered researchers from 174 countries around the world. There are currently 332 registered mentors offering support to mentees and 66 mentoring tasks were completed over the last year. Open online research-writing courses are run approximately twice a year with a number of courses run with partner institutions in both English and Spanish, with a French version of the course in development. AuthorAID is currently working with 15 partners in four countries to introduce and run their own research-writing courses.

> "As a mentor I do a lot of language editing of articles but I also go deeper and suggest some other articles they might have missed and how to frame the research differently. Mentoring can be satisfying. It's very good when you see that the work gets published and is used and read by other researchers."
>
> Matt Hodgkinson, Senior Editor, PLOS ONE at Public Library of Science and AuthorAID mentor, UK

The AuthorAID team is currently developing new features to the online mentoring system so that mentors and mentees can be awarded electronic badges for mentoring tasks completed.

AuthorAID mentors report that they not only have the satisfaction of passing on knowledge and skills, but they also discover new research, make new contacts and develop their mentoring skills. To acknowledge the commitment and work of the mentors, we are currently developing certificates and digital badges that will be awarded on completion of tasks and appear on their user profiles. We have also introduced a mentor newsletter to engage our mentors regularly with good news stories, news about the website, details on mentees who have recently signed up, and ways in which they can help recruit new mentors.

For researchers who are supported by mentors, this normally results in a strong personal connection, and a big step forward towards publication. For example, in 2010 Rhoune Ochako from Kenya was mentored through AuthorAID and since then she has published 10 papers in reputable journals.

We discovered eight peer-reviewed journal articles (by querying Google Scholar for the year 2015, and via communications from mentees) published in 2015 that acknowledged support from AuthorAID mentors, and another two that acknowledged AuthorAID in general. We believe that many more papers were published without explicitly acknowledging the support received through AuthorAID.

In addition, several recent blogs and magazine articles about AuthorAID-supported researchers specifically acknowledged the support of mentors. Recent examples include an article in the careers section of Science[1] by Ahmed Waqas, a mental health researcher in Pakistan; a PLOS blog post by Djibril Moussa Handuleh,[2] a mental health researcher in Somalia; and a case study[3] that we have published on the INASP website about a crop entomologist in Uganda.

While the mentoring approach is very effective, there are practical challenges. Facilitating appropriate matching of mentors and mentees in the online system can be a problem, not least due to the myriad of ways of classifying research topics and areas of interest. This is why the search functions are continuously improved by AuthorAID website developers and why we ask mentors as well as mentees to specify their topic of research and expertise in as much detail as possible in their profiles. We have also introduced new options for mentoring support to help better match mentee needs with the support that can be offered. These include options on career mentoring, the writing of technical briefs or policy briefs, and systematic reviews.

There are thousands of early-career researchers in developing countries who would like mentoring support but only a much smaller number of experienced researchers available in the system. To tackle this problem, the AuthorAID team is approaching research institutes and societies to encourage their staff and members to join the system and become a mentor. This is balanced by a quality-control process to ensure that mentors have sufficient experience with scholarly publications to meet the needs of the larger mentee community.

AuthorAID mentees and mentors work together in the ways that best suit them. This can mean that the relationship and communication between mentor and mentee happens within or outside of the platform. Although this is enabling good relationships, it hinders monitoring the level of communication and completion of mentoring tasks. This is why AuthorAID encourages communication through the online system and is improving the tools used to achieve this.

The online mentoring platform becomes cost efficient at a certain scale. The fixed costs involved in designing and maintaining the online platform need to be spread over a larger number of supported researchers to bring the cost-per-beneficiary down. We are currently building up the system user base,
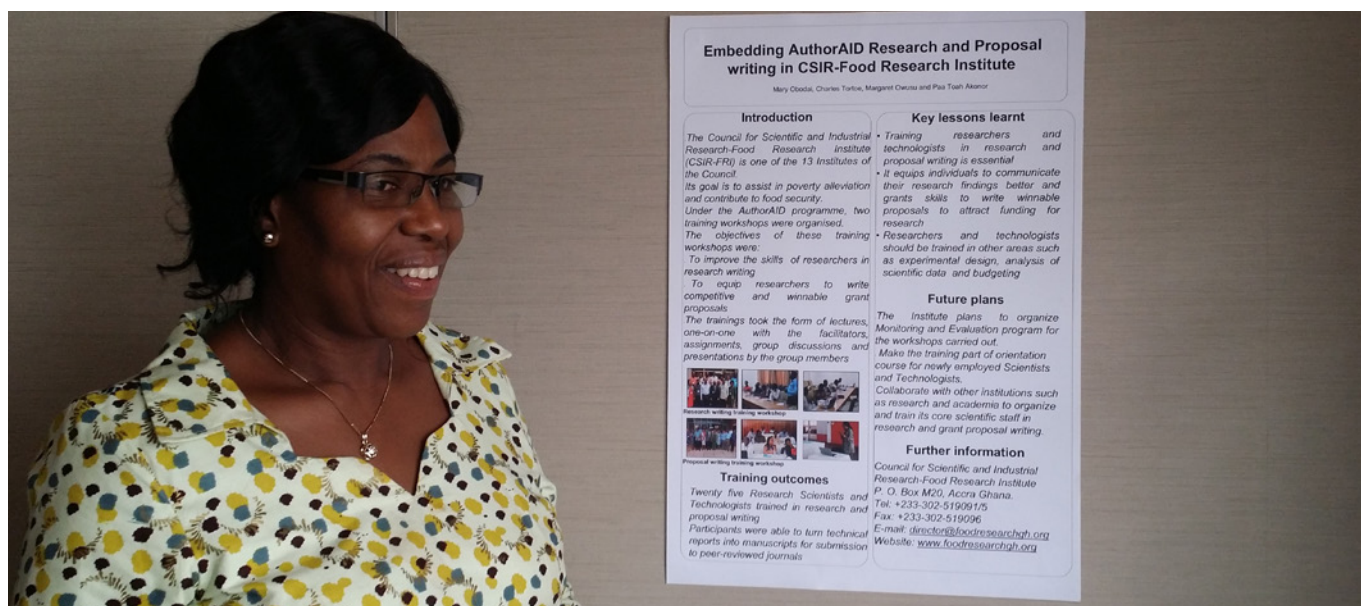
Dr. Mary Obodai, Principal Research Scientist, CSIR-Food Research Institute, Ghana presenting at a poster session, AuthorAID Annual Meeting, Sri Lanka. The poster was about embedding of research and proposal writing skills at the Institute.

which will bring down average costs. If we can expand the mentor and mentee user base to a higher level and ensure the processes are efficient, such as quality control of mentors, then the mentoring platform provides the most cost effective form of support. This is based on the strong one-to-one relationships and the fact that that support is offered for free by the mentors.

Support to institutions to establish and run research-writing courses

Over the last three years we have been working with universities and research institutions in the south to support them to develop the skills to run their own research-writing courses and to embed these courses into their curricula or professional development programmes. AuthorAID provides support to trainers from southern universities and research institutions in research writing and in pedagogy skills to enable them to use and adapt research-writing training materials to their local contexts in a sustainable way.

Face-to-face training can be successful in building confidence, knowledge and skills. However, the cost of providing training by non-local experts is prohibitive beyond a very small scale. To provide cost-effective training,

in a manner that will carry on far beyond a donor-funded project, the research-writing courses need to be integrated into the normal training processes of researchers within their institutions.

How AuthorAID embedding works

AuthorAID embedding in an institution takes place over a period of several years. The activities and timings vary from institution to institution depending on local context but the embedding of research-writing courses generally takes place in three stages:

AuthorAID provides a grant to cover the main facilitation and logistical costs for an initial two-year period. In this first phase, AuthorAID provides training materials and support to adapting these training materials to the specific needs of the institution. Institutional trainers participate in an AuthorAID online research writing course and then undergo a face-to-face training of trainers in research writing and pedagogy skills and support is provided on how to monitor and evaluate the courses. In the second phase, AuthorAID continues to provide reduced support and institutions run the training themselves. The third phase, typically in the fifth year, sees institutions adopting the course into curricula for PhD and Masters' students or for professional development schemes of research staff, faculty staff and lecturers. In this way the course can be offered on a long-term basis.

Through this process, AuthorAID provides advice and guidance in a range of organizational aspects, such as how to best sustain the courses beyond the funding period and how to monitor and evaluate them. Opportunities for learning and exchange between the different partner institutions are provided through events and existing INASP networks.

> ## "The writing club is a successful method to facilitate writing skills and guide authors to produce high quality papers."
>
> ### Professor Nadira Karunaweera, Professor and Chair, Faculty of Medicine, University of Colombo, Sri Lanka

Embedding training in research institutions provides a very cost efficient alternative to the traditional style of internationally facilitated face-to-face training. Facilities are normally available in the institutes at no cost and students, researchers and staff, including the facilitators, are based at the institutions, which reduces travel and accommodation costs. The approach has the advantages of the course bring run in a familiar learning environment. In addition, positive group dynamics in the training can extend beyond the courses; we see the universities and institutes establishing other support mechanisms to complement the training. For example, a mentoring programme and writing club at the University of Colombo's Medical Faculty Research Promotion and Facilitation Centre in Sri Lanka were developed to further support individuals on the training course. In the first cohort of 30 mentees, seven submitted and three published their papers while 20 were in final draft. Following representatives from the embedding partners meeting at an AuthorAID project event in Colombo in November 2015, the University of Dodoma in Tanzania and the Food Research Institute in Ghana have been inspired to make changes to their own writing club formats. The University of Colombo is now training staff in other faculties and institutions in Sri Lanka on developing research writing courses and clubs.

Our analysis based on the AuthorAID Survey 2015 indicates that the institutional training is not yet as effective as other face-to-face or online courses; trainees report lower gains in confidence and contribution to the publishing of papers. However, this finding contradicts the experience that the University of Colombo is having with its training participants and mentees, and the positive feedback we receive from many of our other partner institutions. For instance, the Institute for Scientific and Technological Information in Ghana reported that 40% of participants taking part in its research writing courses submitted an article for publication within nine months of the training. There are a number of factors behind the findings in the 2015 survey, which may help to explain why the institutional training was not perceived as effective as other approaches. This includes the fact that at most the institutions have only been running their courses for a relatively short time, and we do not yet know how long it will take for improvements in organizational capacity to translate into individual successes. As the 2015 survey was conducted via the online AuthorAID platform, we are also not able to assess how representative the survey sample was of the embedding beneficiaries.

The great potential for this approach is that the courses will be truly embedded within the university or institutions' processes and with the expertise of their own trainers, resulting in continuation of the training over many more years. It is at this stage that that the higher short-term investment costs associated with the organizational capacity building in the first two of the five year programme pay off. Already, several institutions are thinking about how to support the course financially over the long term, for instance by charging participants a small fee or by budgeting for it in funding proposals.

Open online courses

A third strand of AuthorAID's support to early-career researchers is online learning. AuthorAID provides open online courses in research writing on a Moodle learning platform. The Moodle platform allows INASP and partners to deliver highly accessible and low-bandwidth training courses

> ## "Training researchers and technologists in research and proposal writing is essential as it not only equips individuals to communicate their research findings better but also develops skills to write winnable proposals to attract funding for research."
>
> ### Dr Mary Obodai, Principal Research Scientist, CSIR-Food Research Institute, Ghana

> **"I took part in a recent research and proposal-writing course; at the end I was so much more confident about starting on a proposal and putting it out there for criticizing. I believe the hardest part is always to start. Now as I get ready to start on my PhD, I have lost almost all my former anxiety about putting ideas on paper. The course made the proposal and research-writing process sound much more logical and doable."**
>
> **Lynda Nakalawa, participant of an AuthorAID open online course**

free to participants. Currently, AuthorAID's open online courses last for approximately six weeks and participants are expected to contribute four to six hours of engagement per week. Courses are structured in a very flexible manner, are interactive and participatory and designed to be easy to navigate for first time learners. Emphasis in course design is placed on a learner-centred approach, involving many activities, peer-review processes, and forums for discussions and questions.

Our online courses enable early-career researchers to participate regardless of their location. In recent courses we have been able to extend to a much wider range of countries, notably more fragile and conflict-affected states such as Somalia, Afghanistan and Yemen, areas which would be much harder for us to reach through other training methods. In addition to providing practical support to researchers in these countries, their involvement has also served as a diagnostic tool, allowing us to better understand the needs of researchers in these

countries with regards to research communication.

In the past, AuthorAID ran the online courses with minimal resources. As we have scaled up our online courses in recent years, several changes and improvements have been made to both the content, appearance and usability of the courses. The team running the courses now includes a learning designer who focuses on the pedagogy and design of the course as a learning tool, a technical designer responsible for putting the courses onto Moodle, and an administrator who ensures smooth participant enrolment and running of the course. We have also advertised the courses more widely through external communications and targeted our partner institutions and countries. In our last open online research writing course we successfully experimented with facilitation of the course's discussion forum by experienced volunteer researchers drawn from our AuthorAID mentors, grant winners and partner institutions. These developments allow us to run higher quality online courses

with a stronger learner-centred pedagogy enriching the learning experience of each participant and providing facilitation across time zones.

The course provides a reasonably generic approach to research writing, across research disciplines, favouring breadth of applicability rather than depth in a given topic. A recent open online course attracted more than 1,700 applicants, with about 1,300 individuals starting the course. Due to the large number of participants, the costs on a cost-per-participant basis are very low. Participation is free to the trainee with the only requirement being to have a modest-low bandwidth internet connection. As a result of the course, participants report that they gained confidence in research writing and are better able to write their research papers and communications.

Comparing approaches

Each of the approaches discussed here have their own advantages and disadvantages. Approaches that are more sustainable in the long term can be less cost effective at the beginning and slower, than approaches that are less sustainable.

Our mentoring programme is suitable for researchers who actively undertake research, for example those who have a research plan or a draft manuscript and require support in writing up research findings or answering particular questions. For the mentoring programme, we know that the one-to-one support from experienced researchers is very effective in terms of direct publication outcomes and that the number of mentors and mentees can be expanded to make the system more cost effective. In relation to this, the AuthorAID team is approaching professional research societies and universities

to increase the number of mentors available in the system.

Support to universities and research institutes to establish and run research-writing courses can result in a greater range of courses implemented. For example, AuthorAID's generic training material can be used, providing general training or the material can be adapted for a specific subject and local context, or to incorporate appropriate forms of feedback sessions and activities. At the present time it is too early to know if the support will result in sustainable courses embedded into organizational processes, although some of the institutions are already showing a high degree of ownership and motivation to continue

beyond the funding period. The partner institutions are currently investigating ways to sustain the courses within their institutions. There is a clear potential for linking the research writing training to other iniatives within an institution, such as journal writing clubs and mentoring programmes, as has been demonstrated by the University of Colombo.

Our open online research writing courses provide broad, generic skills training in research writing applicable to a wide audience of early-career researchers. Open online courses are generally successful in that participants report increases in research writing confidence levels and support towards publication. The online

courses can provide support to a large number of researchers at relatively low costs, but they do not provide the direct support to publication that the mentoring programme can.

In terms of sustainability, the support to universities and research institutions to run research-writing courses provides a way to make the training courses sustainable beyond AuthorAID's support. The mentoring programme is sustainable in that the services are provided free of charge and by people who are external to INASP. However, the management of the online system and basic maintenance is dependent on external funding. Open online courses are not sustainable per

	Benefits	**Constraints**
Mentoring scheme	Highly effective in terms of direct publications, writing confidence levels and networking Conducted online, saving logistical costs Provides a flexible volunteer model and 1:1 support to the mentees As we increase the number of beneficiaries, the system will be more cost-effective	The mentoring scheme currently depends on available funding for AuthorAID for the management of the online system
Embedding face-to-face training	Links local facilitators to a familiar audience Allows for course adaptation to local needs creating ownership Builds institutional capacities and supporting processes, such as journal clubs and mentoring schemes Targets staff' professional development If course is sustainably embedded in partner institutions, the investment costs related to organizational capacity building are paying off	Institutional processes to embed courses in curricula and professional development schemes can be slow Programme is currently ongoing, hence it is too early to gauge the overall sustainability although in some cases institutions are progressing well
Open online courses	Very low cost (but not zero cost) Time, place and participants' background does not matter much Catered to low-bandwidth needs Targets a very broad audience	Rather generic content Roll out of courses currently depends on available funding for AuthorAID

> **"It is just two weeks now since I completed my online training on proposal and research writing organized by INASP's AuthorAID jointly with Open University of Tanzania (OUT).This training has helped me to improve my proposal in the MSc studies that I'm currently doing with OUT. Furthermore, the participants have formed a Journal Club at our university and we are now sharing among ourselves information about research and announcements from AuthorAID about funding and training courses."**
>
> **Victor Mtulimbogo, Training course participant**

se, as they require funds for IT, facilitation and administration at the most basic level. However, we are currently piloting the handover of our online courses to partner organizations, and are supporting the Open University of Tanzania, the Tanzanian Fisheries Research institute and the University of Colombo to set up and run online courses from their own Moodle platforms and with their own online facilitators.

What's next?

The study looked at each of the AuthorAID approaches individually, but over the last few years we have seen the benefits of integrating the different elements of AuthorAID support. Some examples include:

- Our online course participants and embedding partners have made increasing use of the AuthorAID discussion list to ask and answer questions about research communication. During the last MOOC an online collaboration forum was set up which allowed researchers from across the globe to discuss potential collaboration on writing and research projects.

- Mentors, grant winners and representatives from our embedding partners have

volunteered to be guest facilitators on our online research writing course. This is enabling us to build a pool of facilitators which will help to provide a rich experience for course participants and allow us to run more courses, in addition to building skills and capacity in online facilitation across the AuthorAID network. This is also contributing to the process of building capacity within our embedding institutions to run and facilitate online courses.

- The flexibility in our approach to the embedding model has allowed institutions to innovate and run the training according to their own context, such as the writing club model at the University of Colombo.

We will continue to develop the synergies and potential between the different AuthorAID approaches in coming years. We intend to organize more opportunities for peer learning through communities of practice, discussion forums and country-level and regional learning events. We hope to better link the provision of mentoring support to the longer-term assistance needed by online course participants, and to provide remote mentoring support to researchers in our partner institutions. We will promote more southern ownership

over the AuthorAID platform, encouraging all of our network to be leading and shaping the platform to respond to their needs.

References

1. How I made my own opportunities, Science, 18 March, 2016, science.sciencemag.org/content/351/6279/1358

2. My journey from civil war to global health, PLOS Translational Global Health, 7 August, 2015 blogs.plos.org/globalhealth/2015/08/journey-civil-war-global-health

3. Ugandan entomologist overcame barriers to publication with help from the AuthorAID network, Stories @ INASP, 3 March, 2016, www.inasp.info/en/publications/details/210

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