

## PUBLISHED VERSION

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### Scientists publishing research in English from Indonesia: Analysing outcomes of a training intervention to inform institutional action


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## Scientists publishing research in English from Indonesia:

### Analysing outcomes of a training intervention to inform institutional action

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#### 1. Introduction

Indonesian universities are now facing a mandatory requirement for candidates to publish a paper in English in an international journal before a PhD degree can be awarded (Directorate Generale of Higher Education-Indonesian Ministry of Education [DGHE], 2012). The introduction of this requirement follows a similar action in China, where the bar is set higher at a journal indexed in the Science Citation Index or equivalent for candidates in the sciences (Li, 2006). This new requirement adds considerably to the already strong pressure experienced by Indonesian academic supervisors/advisors to achieve international publications and citations themselves (Sanjaya, Sitawati & Suciani, 2015), especially in the natural and life sciences (Hanauer & Englander, 2013). A factor that can be expected to contribute to the pressure is the limited nature of instruction in English for Academic Purposes [EAP] for both undergraduate and graduate students (Sadtono, 2001), especially as regards academic writing. There is thus a need to investigate how Indonesian academics are adapting to this additional pressure, as well as to test new educational initiatives for strengthening the skills of both

mentors and authors in Indonesia when writing for publication in English. Such an initiative is the CIPSE [Collaborative Interdisciplinary Publication Skills Education] training approach. Developed by Cargill and O'Connor for use with early-career science researchers and implemented successfully in a range of Chinese contexts (Cargill, 2011; Cargill & O'Connor, 2012), this approach features the integration of perspectives from science, applied linguistics and education. However, a range of context-specific differences may affect its suitability for use in the Indonesian higher education setting. Overall, little research has been published to date investigating the challenges faced by Indonesian supervisors and their graduate students in this new context, or moves to help address the challenges. Here we contribute to addressing this lack by reporting on an invited intervention (a five-day CIPSE workshop) delivered to a cohort of staff from one faculty of a highly ranked Indonesian university in 2014, and a follow-up study with participants 12 months later.

A strength of the project design was that it built on an existing network based on scientific and educational collaborations over 20 years, which was expected to help overcome the potential pitfall of 'one-shot' professional development programs (Cannon & Hore, 1997). The workshop design and the follow-up study both reflected learning gained from analysis of similar events in Chinese contexts by the two first-named authors of this chapter across the period 2001-14 (Cargill & O'Connor, 2006a, 2006b; Cargill, O'Connor & Li, 2012; Cargill, O'Connor & Matthews, 2014). Questions addressed in the research presented here are as follows:

1. What were the most serious problems in getting published noted by participants before the intervention?
2. To what extent did the confidence of workshop participants to write research articles in English and to mentor their students' article writing change between pre- and immediate post-workshop data collection, and what further changes in confidence were reported 12 months post-workshop?
3. What were the subsequent trajectories of the papers that participants worked on at the workshop?
4. What were participants' perceptions of the usefulness of the workshop immediately post-attendance, and what had they used most 12 months later?
5. How did their suggestions for improvements differ between the two time points?
6. What did they think they most needed 12 months post-intervention in order to contribute to future progress?
7. How did they think their university should provide support to staff and graduate students for publishing in English?

In the light of the data and analysis presented in answering these questions, we discuss implications for moves to embed this kind of educational initiative in the research training and professional development activities of the university, both in the faculty where it was trialled and more broadly. We also compare the perceptions of our workshop

participants with those of academics in other comparable countries, with the goal of presenting recommendations grounded both in the literature and in the lived experience of Indonesian scientists.

## 2. Material and methods

### 2.1. *The 2014 intervention: Five-day CIPSE workshop*

The workshop was collaboratively designed by the author team with dual focuses:

1. development of authoring skills and drafts of research articles already in progress
2. development of skills and materials for teaching and mentoring graduate students in writing papers for publication in journals that meet the national requirements.

Participants were selected by team members from the Department of Biology, Bogor Agricultural University [IPB], Indonesia (Raffudin, Sukarno, Juliandi and Rusmana). In all, 23 people (4 male, 19 female) completed the workshop, of whom 16 were working on their own manuscript as well as learning mentoring skills. Three participants came from other departments of the Faculty of Mathematics and Natural Sciences (Computer Science, Mathematics and Geophysics and Meteorology), at the request of the faculty dean. All participants were provided with a copy of the workshop textbook (Cargill & O'Connor, 2013), and the workshop program (Appendix I) followed the order of materials in the book. Where writing time was built into the program, participants without their own drafts worked in small groups to discuss the applicability of the materials and exercises just presented to their own teaching contexts and to adapt them for enhanced usability. The workshop was presented by the two first-named authors of this chapter, with Cargill (an applied linguist) taking the lead where the material emphasised genre analysis, corpus linguistics and specific aspects of the use of English in science writing, and O'Connor (a scientist and science educator) taking the lead for issues of publication strategy and data presentation. (More detailed discussion of the collaborative and interdisciplinary nature of the CIPSE workshops can be found elsewhere; see Cargill, 2011; Cargill & O'Connor, 2010.)

Participants completed pre- and post-workshop seven-point Likert scale estimations of their confidence for four tasks: writing a paper in English for international publication, dealing with the publishing process in English, mentoring/assisting others to write a paper in English, and mentoring/ assisting others to deal with the publishing process in English (1 = not confident, 7 = very confident). They also provided pre- and post-workshop assessments of the percentage completed of their manuscript, if applicable. Participants also responded to open-ended questions:

- What are the three most serious problems you face in getting published? (pre-workshop)
- What were the most useful things in this workshop for you? (post-workshop)

- How could this workshop be improved to make it more useful for Indonesian researchers? (post-workshop)

The workshop was conducted, and questionnaires were written, in English, with translation into Bahasa Indonesia available on request at all times. Questionnaires were identified by participants' dates of birth to allow matching of pre- and post-workshop responses. Paired sample *t*-tests were used to test for significant differences.

## *2.2. The 2015 follow-up study*

Twenty of the original 23 participants were able to be contacted 12 months after the 2014 workshop and agreed to meet with the first-named author of this chapter, Cargill. Each participant was asked if they preferred the interview to be conducted in Bahasa Indonesia, with translation assistance provided by one of the IPB team members, or in English. All but one opted for English. Participants were first asked to complete the same four post-workshop Likert-scale questions they had answered immediately after the original workshop in 2014. The remainder of the interviews were semi-structured, and response notes were constructed in consultation between the interviewer and the interviewee. Text in quotation marks in the following sections presents representative quotations from these notes, or from participants' questionnaire responses; quotes are identified with a participant number and year — for example, P21, 2014. Questions that guided the interviews were as follows:

1. Looking back, what are the things from the 2014 workshop that you have used most in the last 12 months?
2. From the perspective of 12 months' experience, how could the workshop you attended in 2014 be improved to make it more useful for Indonesian researchers?
3. What is the subsequent history of the manuscript you worked on in the 2014 workshop?
4. What is the most important thing you need now to help you write and submit publishable papers on your research?
5. In your opinion, how should IPB provide training or support in journal article writing for staff and PhD students?
6. Do you have any additional comments for us about your experience of trying to publish your research in international journals?

## **3. Findings and analysis**

### *3.1. The most serious problems faced in getting published: Pre-intervention assessment*

Before the training commenced, participants were asked to list the three most serious problems they faced in getting published. Responses clustered in three main areas: issues to do with obtaining suitable data, including analysis, infrastructure and facilities;

English grammar; and writing effectively in English, including constructing a well-argued story within the conventional article sections (Table 8.1). Lower numbers of responses highlighted lack of publication experience, especially journal selection; time; access to and use of appropriate literature; dealing with the publication process; and funding for research activities and publishing fees.

Issues related to English rated highest overall when the two subcategories are combined, and it is of interest that these scientists made clear distinctions in these initial responses between the more mechanical, sentence-level issues (grammar) and those relating to the production of a convincing argument or story. This level of sophistication boded well for their ability to engage effectively with the workshop approach.

Problem category	Number of instances
Data issues, analysis, research quality, technology	21
English — grammar	14
English — argument, story, article sections	12
Lack of publication experience/choosing journals	6
Time	5
Literature access and use	3
Dealing with review process	3
Funding	3

Table 8.1: The most serious problems in getting published faced by Indonesian scientists ( $n = 23$ , up to 3 items per respondent). This analysis of written responses was collected at the start of the 2014 CIPSE workshop.

### *3.2. Confidence to write and mentor writing of research articles in English for international publication*

Participants' mean self-reported confidence increased by more than one point on the seven-point scale ( $p < 0.001$ ) measured immediately pre- and post-workshop for all four competencies targeted in the 2014 workshop: writing articles in English for international publication, mentoring/assisting others to write such articles, dealing with the publishing process in English, and mentoring/assisting others to deal with it (Table 8.2). In a realistic response, as also seen in other training contexts, some participants reported a decrease in confidence on gaining a better understanding of the challenges involved: 'I don't have enough of confidence because I need more time to learn how to make manuscript especially in English' (P21, 2014).

Task	Pre-workshop (n = 23)	Immediately post-workshop (n = 23)	12 months post-workshop (n = 20)
Write a research article in English	3.5	4.9	5.1
Mentor/assist others to write a research article in English	3.3	4.7	4.9
Deal with the publishing process in English	3.3	4.5	5.0
Mentor/assist others to deal with the publishing process in English	3.1	4.5	4.9

Table 8.2: The mean self-reported confidence of workshop participants for four tasks at three time points. Confidence was assessed on a seven-point Likert scale (1 = not confident, 7 = very confident).

The increases in mean confidence were maintained and further increased after 12 months (Table 8.2), but the further increases were again not completely uniform across the workshop cohort, with 3 to 5 participants reporting a decrease in confidence for these competencies 12 months post-workshop (Table 8.3). These findings highlight the range of levels of experience and skill among the participant cohort, and emphasise the challenges inherent in providing professional development for them.

Task	Increase in confidence	No change in confidence	Decrease in confidence
Write a research article in English	7	10	3
Mentor/assist others to write a research article in English	7	8	5
Deal with the publishing process in English	9	7	4
Mentor/assist others to deal with the publishing process in English	5	12	3

Table 8.3: The number of participants (n = 20) who reported an increase, a decrease or no change in self-assessed confidence for four tasks between immediately post-workshop data collection and 12 months post-workshop.

### *3.3. Most used things from the 2014 workshop*

All 2015 interviewees reported content from the 2014 workshop that had been frequently useful and used in the subsequent 12 months. Commonly mentioned was the process taught for article construction: starting with results visuals plus dot-points under each one and identifying take-home message/s. Several respondents mentioned that students often were not comfortable with this approach when it was first introduced because they expected to start with the introduction, but that it gave good results. This process was linked to the importance of identifying a suitable target journal early in the process: ‘The crucial problem in publishing scientific paper is to find the right targeted journals’ (P8, 2015). Participants reported that the whole *Writing Scientific Research Articles* [WSRA] package (Cargill & O’Connor, 2013) had been used in teaching undergraduate and master’s students and in their own research groups, as well as for correcting drafts and reviewing for Indonesian journals:

Almost all because they are in one package — how to design experiments to get publishable data which also drives discussion. Opens minds of students that they need to read a lot to choose topic, which increases logic and critical thinking, analytical thinking — workshop materials do that in a comprehensive way, by demonstration. (P3, 2015)

One respondent reported that the training workshop slides had been incorporated unchanged into materials for a research methodology course he taught to 100 students. Specific aspects of English grammar and usage were also frequently mentioned as most used, especially verb tense. The freeware concordancing software the Adelaide Text Analysis Tool [AdTAT] (Hall, 2007) had been introduced to students by many participants, including in the department’s journal club, for identifying key vocabulary and checking issues such as preposition usage. Thus it is clear that the workshop content, textbook and approach had met real needs for the participants and provided a raft of material for ongoing use.

All the mentioned elements had also been present in the responses to the 2014 post-workshop question: ‘What were the most useful things in the workshop for you?’, but in less specific forms overall. In those data there was an emphasis on increased confidence, on strategies for getting published, on the process of starting from the results when writing, and on improved English language skills, but with a focus on articles, ‘right words’ and writing sentences rather than on tenses, which was the stand-out feature 12 months later. The AdTAT program was mentioned several times, indicating that its usefulness was recognised right from its first introduction.

### *3.4. Subsequent trajectories of workshop manuscripts*

Self-reported level of manuscript completion reached a mean of 60% subsequent to the 2014 workshop, increasing over the five days by a maximum of 60% (mean 28%), with



five participants having begun with no text written (data not shown). Of the 16 papers that were being worked on during the workshop, 7 were submitted in the following 12-month period: 3 published in Scopus-listed journals, including 1 in the highly regarded *Nature Communications*; and 4 submitted to non-Scopus-listed journals. Interestingly, however, 18 subsequent papers had been published, 5 in Scopus-listed journals, and another 9 submitted (3 to Scopus-listed journals), most of which had been co-authored with master's students. These figures point towards a factor likely to be highly relevant to the modest numbers of workshop papers submitted or published — the high number of master's students for whom these staff members serve as supervisors, and who must also publish their results in academic journals, although the international journal requirement does not apply for master's-level candidates. Members of the biology department supervise on average six master's students, although not all of these proceed to undertake PhD degrees at IPB, some preferring to seek to study overseas. This high number of master's students is due to the high number of applicants to the study programs in the Department of Biology, but it seems to militate against increasing staff publication rates: 'Student deadlines push my own further distant' was an interview comment made (P7, 2015).

### *3.5. The most important things needed now to enhance progress (n = 19): 2015 views*

The cluster of factors covered by 'facilities, infrastructure and funding' was the most prevalently cited overall as important for future progress at the time of the interviews. These issues were held responsible for limiting the level of journal that would accept papers, as reflected in these comments: 'not very high level journal because of infrastructure limitations' (P5, 2015); and 'rejected due to quality of the photomicrographs' (P20, 2015). Funding was specifically requested to cover open access article processing charges. Time was the most frequently mentioned single factor (6 mentions), with heavy teaching and administrative workloads often being responsible; these are in most cases increased for staff who have just finished higher degrees. Five participants indicated a need for a consultant or mentor to work with them on their article writing when they were ready for assistance; another 3 specifically focused on the need for assistance with English. Taken together, these suggest that language-related support is commonly felt to be an important need, but the number of mentions is much lower than that before the intervention (Table 8.1). This change suggests that the relative importance of infrastructure and facilities had become greater for the participants after 12 months of working with the techniques and strategies introduced in the workshop. One interviewee cited 'good quality students' (P17, 2015) as one of their most important needs, an issue that had not been mentioned previously.

### *3.6. Suggestions for workshop improvement*

Participants were asked both immediately after the completion of the workshop and 12 months later how the workshop could be improved to make it more useful for Indonesian researchers. There were three main differences between the two sets of answers. Twelve months post-workshop there was a much-increased recognition that participant preparation was a key to obtaining best benefit from the workshop, and that the most important improvements needed to take place before the workshop was delivered: the English writing ability of participants needed to be stronger, and all participants needed an advanced draft manuscript so they could take better advantage of the presenters' expertise. One participant stated:

We have to have a good ability in making sentences — otherwise we get stuck ... I have trouble helping my students with that. Participants, including staff need prior help at this level before your workshop. (P20, 2015)

Second, there was an ongoing emphasis on how the workshop should be presented but no single agreed position, although scheduling the workshop in the exam period to allow good access for staff was a common thread. One cluster of respondents thought five days was sufficient but wanted a less intensive format with more discussion. A larger grouping of responses recommended doubling the workshop duration to two weeks but halving the contact time to half-days only, so participants had plenty of writing time to apply the teaching to their drafts. Both groups requested more individual support with their writing, including editing assistance, and suggested ongoing support by email after the presenter/s returned home.

Immediately post-workshop, there had been a strong emphasis in responses to the question of extending the reach of the training to more Indonesian researchers and to postgraduate students. Twelve months later, this issue was taken up in a separate question on recommendations to the institution.

### *3.7. Views on the institutional provision of support for article writing*

The question posed was this: 'In your opinion, how should IPB provide training or support in journal article writing for staff and PhD students?' Provision of support was seen as a priority: 'Strongly needed ...' (P23, 2015). There was a clear consensus that the university should integrate the training into its regular programs. One participant described the developing situation this way:

When you came here I think it opened many staff minds that writing papers needs a certain capacity ... IPB should integrate training into the regular program. (P20, 2015)

For students, a credit-bearing course was commonly suggested, often integrated with research methodology, which is already taught. One respondent recommended: '[W]orkshops better than courses for students — interactive, not boring' (P1, 2015). It

was also suggested by many respondents that the workshop text (Cargill & O'Connor, 2013) should be translated into Indonesian and disseminated widely. (One suggestion along these lines had been received immediately post-workshop in 2014, and a team had already been established to progress the proposal by the time of the follow-up research visit 12 months later.)

For staff, suggestions featured workshops like that run in 2014 or run by those trained in the Adelaide-run workshops, annually for two weeks in the exam period. Mentor training was a common priority but not seen as a total solution: 'Invite experts like you to teach us to be mentors so IPB has more mentors — we need about 1:5. But still need more help from international experts every one or two years' (P5, 2015). One respondent reported that a five-day workshop was not enough, and recommended sessions once a month taught by train-the-trainer graduates from the 2014 workshop: 'Regular meetings are necessary to reinforce and remind' (P13, 2015). Another focused on the language of training presentations, saying she needed training by Indonesian staff: 'Although native English speakers give good material, I sometimes miss the points — if it is an Indonesian I can ask easily' (P11, 2015). Whatever the format, the recommendation was that training should happen at an institution-wide level, not just in some departments, and in a discipline-specific way: 'IPB should make training that is more private/personal — smaller groups, similar disciplines, not half or one day general training' (P7, 2015).

The need to build in higher English proficiency in reading and writing for students and staff was also clearly recognised. For students, this set of recommendations is representative: 'Get better Master students — use English as a selection criterion and restrict numbers. Give more English teaching using trained ERPP [English for Research Publication Purposes] teachers' (P5, 2015). This last comment refers to an additional training initiative that was undertaken by Dr Kate Cadman, from the School of Social Sciences at the University of Adelaide, at the same time as the research visit, with input from the first author. This initiative involved a full-day workshop for the public and invited guests, plus a train-the-trainer workshop for IPB English language teachers; it introduced the teaching and research specialty field of ERPP (Cargill & Burgess, 2008). This next response reflects the experience of one participant, highlighting the need for an integrated approach: 'Focus on both story/structure AND English grammar; workshops just like 2014; because we got a paper translated by the English service translator, but they have limitation in biology terms, therefore we had to modify it to correct one' (P15, 2015). One participant had specific suggestions about working with ERPP-trained staff for both student and staff training: 'Divide but teach both types in teams of scientist with trained ERPP staff: grammar stuff 30/70; scientific writing 70/30' (P19, 2015). Another respondent said: 'Staff English — make a ERPP course for them, but timing is an issue' (P6, 2015). Thus our workshop participants had both recognised the importance of addressing issues of English proficiency in discipline-specific ways, and developed ideas about how this could effectively be done in their institutional context.

#### 4. Discussion

The 12-month gap between the 2014 delivery of our workshop and its re-evaluation by the participants in 2015 has allowed a fresh and informative perspective from which to view the effectiveness of this invited intervention. The picture we have been able to build falls between those that can be painted immediately after training interventions (for example, Cargill & O'Connor, 2012) and those developed from respondents' views gathered in the absence of a focus on any specific training (for example, Hanauer & Englander, 2013; Lillis & Curry, 2010). All three types can contribute to the search for understanding of the issues and challenges facing scholars seeking to publish their research in the context of the dominance of English, and comparing these types of study can add richness to the overall picture.

The workshop participants in 2014 reported significant gains in self-assessed confidence immediately post-workshop (means of 1.2-1.4 points on a seven-point Likert scale) for four competencies: writing a research article in English, mentoring others to write a research article in English, dealing with the publishing process in English, and mentoring others to deal with it. These gains are similar to those typically recorded after CIPSE workshops in China (Cargill & O'Connor, 2012). Of particular interest here is the finding that these gains appear to have been sustained over 12 months for the 20 participants (of 23) who were available in 2015, with modest further increases reported by most participants. The interview study was able to provide details of how participants' efforts to apply the training in their everyday academic working lives may have contributed to this sustained general increase in confidence.

We asked about the subsequent trajectories of the article drafts the participants had been working on in the 2014 workshop. (Not all participants had worked on a paper of their own — some enrolled specifically to gain skills in mentoring: the train-the-trainer cohort.) Of the 16 papers that were worked on, 3 had been published and 4 submitted in the subsequent 12 months — but 18 subsequent papers had been published in English language journals and 9 submitted (8 of the 27 in Scopus-listed journals). A large majority of these papers were with master's students, who are also required to publish their results, although not in Scopus-listed journals. The workload associated with supervising this large number of master's-level papers was identified as a factor leading to the lower productivity of their own first-authored papers for many participants, along with high teaching and administrative workloads. Suggestions for improving productivity included getting better master's students, increasing the English proficiency selection criterion, and introducing more English teaching with ERPP-trained teachers. The workshop materials and strategies had clearly been seen as useful, and used extensively, by the participants in their work with their master's students over the 12 months since the workshop delivery. This included in teaching various courses, in providing advice and mentoring in article preparation, and in correcting drafts. However, it was unclear whether the assistance provided by the workshop training was

likely to free up sufficient time to have an impact on staff article productivity. It is well known that writing articles in English as an additional language [EAL] imposes extra burdens on scholars, and in particular that of the extra time taken to write and edit (Ferguson, Perez-Llantada & Plo, 2011; Flowerdew, 1999). Hanauer and Englander (2013) found that the extra burden experienced by scientist authors writing in English as a second language was greater for those working in a teaching institution, such as the one studied here, than in a research institute. Time was the top-rating single thing identified by our participants as most needed now for progress.

The cluster of factors covered by the terms ‘facilities’, ‘infrastructure’ and ‘funding’ was also commonly cited as most needed now for progress by our participants. There was a clear recognition that the limitations experienced in these areas were affecting the research being conducted and its suitability for publication in the level of journal being targeted by the university as a result of the national policy.

These findings further validate the choice taken early in the development of the CIPSE approach to use confidence as a surrogate measure for outcomes of the workshops (Cargill & O'Connor, 2006a, p. 212). They provide concrete examples of the kinds of factors that can and do intervene between training, however well conceived and presented, and outcomes in the form of published papers. This point is implicit in the strong focus on ethnographic research and text histories in the recent literature in the field of academic publishing (Hanauer & Englander, 2013; Lillis & Curry, 2010).

Participants’ reports of what they had used most from the training in the following 12 months featured a strong emphasis on ‘the whole package’, and indeed the workshop slides, made available to participants in full, had been incorporated into materials used in their own teaching in various ways. Participants had used, in both classroom teaching and individual mentoring contexts, the recommended process for preparing an article, starting with results and the identification of a target journal that matches the type and level of the take-home message (Cargill & O'Connor, 2013, p. 109). It was reported that the effects of using the materials extended to encouraging and informing students’ reading, itself important in the development of writing skills (Bazerman, 2007). This suggests that the CIPSE approach can contribute effectively to two of the types of educational intervention posited as useful by Hanauer and Englander (2013): explicit teaching and mentoring programs. The role of the thesis supervisor as mentor is clearly important in supporting first publication efforts by research students in the sciences (Lei & Hu, 2015). Recommendations to the institution by our participants included continuing the training of mentors using workshops like the one run in 2014 until a ratio of 1:5 is reached.

Specific elements of English grammar and usage were also frequently mentioned as most used. Twelve months post-workshop, the most commonly cited issue was verb tense — unsurprisingly, given the important role of tense in differentiating reference to

past studies and current work, and in marking the author's stance and strength of claim (Swales & Feak, 1994), and the differences between English and Bahasa Indonesia in the marking of tense. This prominence contrasted with a more general usefulness of English grammar identified immediately post-workshop, and suggests that a reason for the shift may have been the relevance of tense to effective storytelling about results, related to the article-writing process focus mentioned previously. The concordancing software introduced and provided in the workshop, AdTAT (Hall, 2007), had been frequently used and introduced to students in a range of contexts, further validating the effectiveness of combining genre-analytic and corpus linguistics approaches for teaching and mentoring article writing (Burgess & Cargill, 2013).

However, issues with the linguistic aspects of article writing clearly remained a strong concern for our participants. The variability of the English abilities of research students, especially master's students, added to their mentoring workload to a large extent. Their recommendations for institutional support for article writing included improving the recruitment of students to increase the English proficiency level used as a criterion, and the introduction of more instruction in discipline-specific English by appropriately trained ERPP teachers. These recommendations echo those of Hanauer and Englander (2013), working in a Mexican university science context. They suggest (in their Figure 8.5, p. 157) commencing explicit instruction and mentoring in scientific writing (and reading) at the bachelor level, in both students' first language and English, and then adding to the types of support provided as students proceed through the master's and PhD levels to become professional scientists/academic staff. The funding implications of such a change in the IPB context would be significant, but without it, efforts to increase publication outputs in line with the university's policy goals are likely to be severely handicapped. Improved participant preparation, including in English, was recognised as the most important improvement that could be made to the workshop, from the perspective of 12 months' experience. The institution's ability to provide the sort of instruction and mentoring recommended by our participants will depend on building a skilled cohort of ERPP-trained staff. The move from general English teaching for passing a TOEFL-type examination to ERPP would require ongoing specialist training. This could build on the foundation laid in 2015, which identified a core of interested staff.

Additional support is also recommended for academic staff by our participants, in terms both of a course to raise English writing skills for those who need it, and of a consultant available to work on drafts with authors in the ways demonstrated during the 2014 workshop. This recommendation echoes the situation in other comparable countries where English is an additional language. Even in Iceland, a country where exposure to English is high and general English proficiency is good but much university education is delivered in Icelandic, almost two-thirds of 238 academics surveyed reported that they needed assistance in writing papers in English (Ingvarsdóttir &

Arnbjörnsdóttir, 2013). A similar situation has been reported from Spain (Moreno, Rey-Rocha, Burgess, López-Navarro & Sachdev, 2012).

Thus the recommendations made by our participants 12 months after the training intervention echoed to a notable degree the seven principles identified by Hanauer and Englander (2013, pp. 166-7) as parameters for institutional decision making:

- long-term commitment to writing education
- differential needs and diversified educational interventions
- multilayered understanding of the research article
- provision of expert support for science and writing
- personalised, continual and immediate support for research article writing
- demystification of the structures and processes of scientific publication
- broad administrative, institutional and financial support.

## 5. Conclusions

In summary, CIPSE workshop participants reported significantly increased confidence to write articles and deal with the publishing process in English and to mentor others in both areas, and the increases were sustained 12 months later. Their recommendations from the 12-month perspective emphasised the importance of institutional-level support for journal article writing delivered in discipline-specific ways. For master's-level students, credit-bearing courses were preferred, combining materials from the 2014 workshop with the research methodology courses already offered in the various faculties and departments. To facilitate this, there was a desire to see the workshop textbook (Cargill & O'Connor, 2013) translated into Indonesian. (Notification has recently been received of the signing of an agreement with the publisher for this to occur, with full funding support provided by IPB.)

However, parallel recommendations concerned strengthening the master's student recruitment process by increasing the English proficiency criterion, and improving instruction in English scientific writing using staff trained in ERPP, including genre-analytic and corpus linguistics methods. These changes are expected to help alleviate the workload pressure that is currently affecting the conversion of a highly positive training experience into published papers at the level desired by the Indonesian higher education sector. For staff, repeated CIPSE workshops were recommended, during the exam period, to increase the ratio of trained mentors to students to 1:5. The strongest recommendation to improve the workshops was better participant preparation beforehand, both in terms of English language ability and prior preparation of an advanced draft manuscript. Expert feedback on drafts was seen as a strong ongoing need, as was improved funding for infrastructure and facilities to address issues with the type and quality of research data that often led to rejection.

This interrelated set of recommendations represents a synthesis of the immediate post-workshop evaluations of participants with their views after 12 months of applying the workshop materials and strategies in the workplace, providing a more nuanced picture of their situation. It reflects similarities with findings from other comparable resource-limited contexts where scientists are facing increased pressure to publish their research in journals written in English but where English is an additional language. What can be claimed on the basis of this analysis, however, is that the CIPSE training approach has provided these Indonesian workshop participants with effective conceptual and practical tools to help manage the pressures they face.

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### References

- Bazerman, C. (Ed.). (2007). *Handbook of research on writing*. New York: Routledge.
- Burgess, S., & Cargill, M. (2013). Using genre analysis and corpus linguistics to teach research article writing. In V. Matarese (Ed.), *Supporting research writing: Roles and challenges in multilingual settings* (pp. 55-71). Cambridge: Woodhead Publishing.
- Cannon, R., & Hore, T. (1997). The long-term effects of 'one-shot' professional development courses: An Indonesian case study. *International Journal for Academic Development*, 2(1), 35-42. DOI: <http://dx.doi.org/10.1080/1360144970020104>.
- Cargill, M. (2011). *Collaborative interdisciplinary publication skills education: Implementation and implications in international science research contexts* (Doctor of Education thesis, The University of Adelaide). Retrieved 8 February 2017 from <http://digital.library.adelaide.edu.au/dspace/handle/2440/72719>.
- Cargill, M., & Burgess, S. (2008). Introduction to the special issue: English for Research Publication Purposes. *Journal of English for Academic Purposes*, 7(2), 75-76.
- Cargill, M., & O'Connor, P. (2006a). Developing Chinese scientists' skills for publishing in English: Evaluating collaborating-colleague workshops based on genre analysis. *Journal of English for Academic Purposes*, 5(3), 207-221.
- Cargill, M., & O'Connor, P. (2006b). Getting research published in English: Towards a curriculum design model for developing skills and enhancing outcomes. *Revista Canaria de Estudios Ingleses*, 53, 79-94.
- Cargill, M., & O'Connor, P. (2010). Structuring interdisciplinary collaboration to develop research students' skills for publishing research internationally: Lessons from implementation.



- In M. Davies, M. Devlin, & M. Tight (Eds.), *International perspectives on higher education research series: Vol. 5. Interdisciplinary higher education: Perspectives and practicalities* (pp. 279-292). Bingley, UK: Emerald Group Publishing Ltd.
- Cargill, M., & O'Connor, P. (2012). Identifying and addressing challenges to international publication success for EFL science researchers: Implementing an integrated training package in China. In R. Tang (Ed.), *Academic writing in a second or foreign language: Issues and challenges facing ESL/EFL academic writers in higher education contexts* (pp. 21-44). London: Continuum.
- Cargill, M., & O'Connor, P. (2013). *Writing scientific research articles: Strategy and steps* (2<sup>nd</sup> ed.). Oxford: Wiley-Blackwell.
- Cargill, M., O'Connor, P., & Li, Y. (2012). Educating Chinese scientists to write for international journals: Addressing the divide between science and technology education and English language teaching. *English for Specific Purposes*, 31, 60-69. DOI: <http://dx.doi.org/10.1016/j.esp.2011.05.03>.
- Cargill, M., O'Connor, P., & Matthews, R. (2014). Publication skills development in the sciences: Decision support for effective program design. *Revista Canaria de Estudios Ingleses*, 69, 101-114.
- Directorate Generale of Higher Education-Indonesian Ministry of Education. (2012). Surat Edaran No. 152/E/T/2012 tentang Publikasi Karya Ilmiah. Indonesia: Indonesian Ministry of Education.
- Ferguson, G., Perez-Llantada, C., & Plo, R. (2011). English as an international language of scientific publication: A study of attitudes. *World Englishes*, 30(1), 41-59.
- Flowerdew, J. (1999). Problems in writing for scholarly publication in English: The case of Hong Kong. *Journal of Second Language Writing*, 8(3), 243-264.
- Hall, A. (2007). Adelaide Text Analysis Tool (Version 1.5) [Concordancer]. Adelaide: University of Adelaide. Retrieved 8 February 2017 from <https://www.adelaide.edu.au/carst/resources-tools/adat>.
- Hanauer, D.I., & Englander, K. (2013). *Scientific writing in a second language*. Anderson, SC, USA: Parlor Press.
- Ingvarsdóttir, H., & Arnbjörnsdóttir, B. (2013). ELF and academic writing: A perspective from the expanding circle. *Journal of English as a Lingua Franca*, 2(1), 123-145.
- Lei, J., & Hu, G. (2015). Apprenticeship in scholarly publishing: A student perspective on doctoral supervisors' roles. *Publications*, 3, 27-42. DOI: <http://dx.doi.org/10.3390/publications3010027>.
- Li, Y. (2006). *Writing for international publication: The case of Chinese doctoral science students* (doctoral thesis, City University of Hong Kong, Hong Kong).
- Li, Y., & Flowerdew, J. (2007). Shaping Chinese novice scientists' manuscripts for publication. *Journal of Second Language Writing*, 16(2), 100-117.
- Lillis, T., & Curry, M.J. (2010). *Academic writing in a global context: The politics and practices of publishing in English*. London: Routledge.
- Moreno, A.I., Rey-Rocha, J., Burgess, S., López-Navarro, I., & Sachdev, I. (2012). Spanish researchers' perceived difficulty writing research articles for English medium journals: The impact of proficiency in English versus publication experience. *Ibérica*, 24, 157-184.
- Sadtono, E. (2001). Fighting a losing battle : English for Academic Purposes in Indonesia. *NUCB journal of language culture and communication*, 3(1), 45-58.

- Sanjaya, I.N.S., Sitawati, A.A.R., & Suciani, N.K. (2015). Comparing hedges used by English and Indonesian scholars in published research articles: A corpus-based study. *TEFLIN Journal*, 26(2), 209-227. DOI: <http://dx.doi.org/10.15639/teflinjournal.v26i2/209-227>.
- Swales, J.M., & Feak, C.B. (1994). *Academic writing for graduate students: A course for nonnative speakers of English*. Ann Arbor: University of Michigan Press.

## Appendix I

CIPSE Workshop Outline: IPB, Sep.-Oct. 2014<sup>1</sup>

M. Cargill, P. O'Connor and S. Mahalaya

Day 1

1. Introductions, questionnaires; workshop goals and methodology; results take-home messages and journal choice issues; article structures and referee criteria; presentation of participants' journal choices
2. English development issues: concordancing and the New Phytologist corpus; sentence templates
3. Results as article 'driver'; data presentation and refining figures and tables; writing results sentences
4. Revision of Results drafts (continued for homework)

Day 2

1. Q&A on results revisions
2. Methods input and revision of prepared methods sections
3. Introductions (genre analysis of examples) and flow/readability issues
4. Drafting/revising Introduction sections (continued for homework)

Day 3

1. Q&A on Introduction sections
2. Discussion/conclusion sections and strength of claim issues
3. Drafting/revising Discussion and Conclusions (continued for homework)

Day 4

1. Abstracts/summaries; drafting of abstracts
2. Titles and keywords; revision of titles/keywords
3. Process recap and editing procedures
4. Revision/redrafting with input from presenters

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<sup>1</sup> This outline is extracted from the (unpublished) Powerpoint slides used for the workshop given by Cargill, O'Connor and Mahalaya in 2014.

Day 5

1. Submitting and covering letters
2. Responding to reviewers' and editors' comments
3. Final revisions with input from presenters
4. Discussion of pedagogic options for the Department
5. Final questionnaires and evaluation