

The journal article incubator approach to teaching writing skills and enhancing research outputs

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The journal article incubator approach to teaching writing skills to researchers and academics involves a series of engaging and inclusive workshops in which best practice writing, reviewing and rewriting skills are modelled by the presenters and practiced by the participants. This paper describes the design and operation of two incubator workshops conducted recently in Australia and South Africa as well as some earlier workshops in Thailand and Vietnam. These are set in the context of a review of literature drawn principally from published journal articles on writing for peer-reviewed journals. There are three stages to the incubator process, learning about journal article writing and publishing, critiquing the writing of previously published works including critiquing the draft manuscripts of workshop participants, and having participants write their own complete journal article manuscript. Each stage is described and evaluated in detail with the discussion providing the feedback from participants in the incubator workshops carried out by the authors to date. Overall there are many benefits to the incubator approach for teaching writing skills including developing collegiality and relationship building within faculties, increasing exposure of individuals to the research work of others, developing confidence and writing skills for less experienced authors and academics, inspiring academic researchers to be more creative in their writing, and modelling and prioritising effective writing practices as an academic activity. Finally the incubator approach enhances research outputs with respect to publishing whilst at the same time being an effective teaching and learning approach for enhancing academic writing skills.

Keywords: teaching writing skills, writing journal articles, publishing, journal writing incubator, modelling good practice

Introduction: The importance of writing skills in academia

Writing and by extension, writing skills, are fundamental to the university experience for students and academics alike. It is probably fair to say that the vast majority of university work revolves around writing. Undergraduate and postgraduate course-work students frequently write essays or reports while for postgraduate research students the thesis is usually the prime writing task. For established academics research activity for the main part is recorded in written publications of one form or another, but in terms of frequency, most commonly in the form of journal articles. Arceci (2004, p207) makes the point that 'a discovery that is not reported simply did not "happen"' while Matthews and Matthews (2008, px) state that, 'Research is not complete until it is communicated, and publication in a refereed journal is the fundamental unit of scientific communication'. If writing thus becomes the legacy of the original contributions to knowledge that academics strive to accomplish, then developing strong writing skills to enable the effective communication of that knowledge is vital, but as Baron (2007, p15) notes learning to write effectively is a 'lifelong apprenticeship'.

All three authors are academics with responsibilities in teaching, higher degree research supervision and our own research practice; we all also serve on the editorial boards of international peer-reviewed journals in the natural and policy sciences. The lead author has long had an abiding interest in writing and in teaching writing skills; the opportunity to lead a professional life centred on writing probably best explains how he became an academic in the first place. One teaching technique the lead author developed in 1994 and has been using ever since with all university students taught or supervised was to provide them with "An Essay on Essay Writing"; this is a short piece of writing that models or showcases the writing skills that it addresses. Typically updated each year, in 2011 it was expanded considerably through greater inclusion of a literature review of journal article writing guidance materials and provided with the new title, "Writing About Writing, Ideas for Short Report and Journal Article Composition" (Morrison-Saunders 2011). There are other similar formally published examples for writing journal papers (such as Brown et al 1993, Minto 1998 or Powell 2010) and some specifically directed at student writing (e.g. Hamill 1999, Tomaska 2007, Lambie et al 2008) but these tend to focus on a single aspect or suite of particular writing issues rather than modelling and explaining the overall structure and content of 'good' writing as the lead author's approach seeks. The combined package of different examples is of course extremely useful, but for time-poor academics there is merit in having a single document that seeks to distil key messages and tips for good writing from international experience.

Interest in developing writing skills further increased when two of the authors became co-editors of *Impact Assessment and Project Appraisal (IAPA)*, the journal of the International Association for Impact Assessment (IAIA). One of the 'tasks' expected of the *IAPA* editors is to participate in the 'Meet the Editors' session held at the annual conference of IAIA. These sessions are well attended, mostly by 'young' researchers and academics keen to learn how the independent peer review and subsequent article publishing process works. This is a topic that is frequently explained in journal articles about writing, especially within particular fields of study (e.g. Driscoll and Driscoll 2002, Arceci 2004, Weil 2004, Cetin and Hackman 2006, McIntyre 2007, Kalpakjian and Meade 2008). From our direct experiences it became apparent that scholars around the world often struggle with basic writing practice. One common issue identified by all three authors is the difference between thesis writing and journal article writing; a point strongly emphasised by Resta et al (2010). In the role of journal editor (and when reviewing papers for journals more generally) it is not uncommon to simply 'know' when a manuscript has been written by a postgraduate student attempting to convert a thesis into a journal article.

We decided to see if we could improve the writing skills of postgraduate research students and of newer members of academic staff in our home universities and for academics at universities visited overseas. Recognising the importance of peer-reviewed journal publications for universities and individual academics alike (the old adage 'publish or perish' (e.g. see Garfield 1996) remains relevant as the title of the article by Carraway 2006 makes abundantly clear), we made this a focus for a series of workshops that would serve as an 'incubator' for fostering journal article writing skills. The purpose of this paper is to outline the teaching and learning environment we created and the results obtained. As it has been a learning experience for us as presenters of the journal writing workshops, we include our reflections and observations of the process. We also include feedback received from our workshop participants. Comments were obtained via a simple invitation to participants to provide feedback to us regarding their experiences throughout the workshops and article writing process at the end of the incubator workshop series.

Overview, purpose and structure of the journal article incubator workshops

Two journal article incubator workshops by the authors are the focus of this paper; the first at Murdoch University, Western Australia in October-November 2010 and the second at North-West University, South Africa in September-October 2011. The lead author was present at both events; at Murdoch in a mainly supporting role as the second author was the prime mover for those workshops; and at North-West as the main presenter and where the third author played more of a supporting role. While the North-West workshops were run along very similar lines to the earlier Murdoch offering, some modifications were made by the lead author in light of personal reflections on the first event;

comments about these are included in the discussion that follows. The second author previously ran similar workshops at Chiang Mai University, Thailand in October 2002 and at Cuu Long Rice Research Institute, Vietnam in January 2008. Some reflections on these workshops, especially in the context of participants from a non-English speaking background, are also included in this paper.

We initiated the incubator workshops through a departmental email to all staff and post-graduate research students. The email of invitation made it clear that a considerable time investment by participants was necessary to complete the incubator workshops and the dates and timing of the various individual workshop sessions were laid out. It was made clear that the workshops would only be suitable for researchers ready or nearly ready to publish a paper. Five intended outcomes from the incubator workshops were outlined to prospective participants as follows.

- Improved skills and training in the process of writing and publication
- Enhanced abilities for efficient and effective writing of journal papers
- Skills gained in reviewing and revising papers and manuscripts
- Experience gained in providing and receiving constructive feedback on manuscripts
- Completed manuscript ready for submission to a peer-reviewed journal.

While all intended outcomes are important, it is the final one that most likely will appeal to prospective workshop participants. For the North-West invitation, the five intended outcomes were listed as above but with the final one expressed in bold capitals. Additionally, a fixed date of when manuscript submission should be undertaken was provided along with the promise of 'prizes' (i.e. free drinks during a post-course social event) for those who could provide evidence of article submission to a journal. For the Murdoch offering, no such date (or incentive) was included; a point we return to in the discussion of participant feedback.

Selection of participants for both incubator offerings was based on accepting those that responded favourably to the invitation email, however for the Murdoch offering two of the 12 who enrolled dropped out after the first one or two sessions and one person opted to only attend the first session of the North-West offering with all others completing the whole program. From a presenter point of view the number of participants should be determined on the basis of capacity to review draft papers and carry out the critique sessions which are relatively intense (more on this later). For the Murdoch offering we ended up with 10 papers and for North-West seven papers were submitted to the review stage. For the Chiang Mai incubator, there were 20 participants who each submitted a paper, but there were four support academics to help with providing reviewer feedback. In our experience a range of 6-12 participants is ideal on the basis of having a pair of presenters who can share or divide the reviewing work load. In a smaller faculty it could also be well worth proceeding with fewer than six participants (especially if the presenters are confident that all participants will successfully complete the entire process and there is sufficient dynamism in the group to ensure a good teaching and learning environment), but we would generally not espouse higher numbers than 12. If higher numbers of participants are engaged then we suggest it will be necessary to have a greater number of staff participants and to divide the participants into smaller groups for the critiquing stage.

The whole writing incubator workshop process can be divided into three main stages relating to participants', (1) learning about the journal article writing and publishing process, (2) critiquing the writing of others including the author's own writing and (3) writing their own paper; these are addressed in turn.

Learning about journal article writing and publishing

Having determined who the participants were, we distributed some teaching resources to them in advance of the first workshop session. For the North-West offering this included the 'Writing About Writing' document as well as the Minto (1998) and Lambie et al (2008) articles mentioned previously. Discussion-based presentations in a round-table format but making use of *PowerPoint* slide projection on the topic of 'What makes a good journal paper?' formed the basis of the first stage of the writing incubator process. For the Murdoch offering, four such sessions (of two hours duration each) were

held over the course of a week or more, while a single session of nearly four hours duration (with breaks!) was undertaken for the North-West offering. The lead author is of the view that the latter approach ultimately is more effective from a time-management and momentum perspective.

During these workshops, the journal article writing process was 'walked through' step by step, commencing with the question 'Why write?' and how to choose a journal to write for. Then we examined each of the components of a journal article in turn (i.e. title, keywords, abstract, introduction, methods, results, discussion, conclusions and references). With respect to methods, we discussed how the methods section of a journal article should be written up and not the different types of research methods that can be employed (i.e. that is typically the focus of specialist units that higher degree students are expected to already have taken). Attention was given to matters of writing style and presentation matters including the use of figures and tables when presenting research data sets and analysis.

For the North-West presentations, extensive use was made of direct quotations from published sources on journal article writing (with full reference details being provided so as to enable participants to follow these up later if desired). There is of course no shortage of such materials and more general guides to university writing. However the selection in this instance was heavily biased towards journal articles about academic writing skills in order to better 'walk the talk'; the idea being to expose participants as much as possible to a wide range of journal articles written by others.

These workshops were participative, inclusive and interactive with specific activities and discussion points built into them. As much as practical in such sessions, we encouraged participants to engage in writing related activity. One example was based on identifying the target audience for the research carried out by each participant according to the particular findings or 'main messages' arising (e.g. see Brown et al 1993) and making a prioritised list of target journals they would or could write for (importantly the main message would be different for different journals, even though the research program itself was unchanged). Another example involved writing down a title, keywords and abstract for the preferred target journal.

The composition of the participants at each incubator offering varied. The Murdoch incubator was attended by PhD candidates, post-doctoral research fellows, other contract research staff and a visiting academic from an international university (non-English background). For North-West all participants were staff (with a mixture of teaching and research responsibilities), but their academic experience ranged from those writing their first paper arising from recently completed Masters research (three participants), a person writing the first research paper for a PhD program to be based on journal article publication rather than thesis, some mid-career academics, and a Professor of several decades of experience who had supervised many postgraduate research programs and published papers previously. At Chiang Mai, the group of 20 comprised entirely Masters and PhD students, all working with the same group of four supervisors. This was the most cohesive and homogeneous of the groups in terms of writing experience as none of them had published an international peer-reviewed paper before. While the course was run entirely in English that did not appear to inhibit engagement. The course in Vietnam was populated by research staff of the institute, some post graduate students and other staff with limited research experience. Not only was this group the most diverse, the course was all translated (English to Vietnamese; Vietnamese to English), and only five of the original twelve completed.

Critiquing the writing of others

Having learnt the 'theory' about writing, the next step was to apply the thinking and lessons learnt to critiquing the writing of others and this was accomplished in two stages. The first stage involved critiquing an existing published journal article. Because of the diversity of academic interests in the Murdoch participants, two articles were selected for the critique process (one each from the natural and social sciences respectively) while just one was used at North-West. The articles were distributed at the end of the previous workshop series and a break of several or more days provided for participants to complete their own critiques. Participants were provided with a review guideline or

checklist (drawn from guidance provided to authors submitting to *Agronomy Journal*, USA) to assist in this process; importantly they were directed to undertake their critique such that the feedback could be provided in writing to the affected author.

When the group reconvened, the published article being critiqued was projected for all to see and we progressively worked through it starting with the title. Participants were asked to provide their feedback verbally in a collective discussion approach and the presenters would respond with their own critique comments on each topic after initial responses from participants. A core purpose was to develop critical reading skills that would assist participants with their own writing as well as helping those who might in the future be called on to carry out peer-reviews for journals. Hamil (1999) utilises critiques of existing works as a means of teaching writing skills while Tomaska (2007) goes even further by having students rewrite published scientific papers as a learning to write technique. From the perspective of a journal editor seeking to improve scientific writing, one of the initiatives reported by Finlayson (2009) was to institute a reviewer training workshop at a conference of the Canadian Association of Occupational Therapists which included discussion on reviewer roles, responsibilities and ethical issues related to reviewing as well as providing participants with the opportunity to discuss an actual review under the guidance of an experienced reviewer.

As part of the critique process we asked participants to summarise the main message of the paper in just two sentences; these were then shared with the group. This exercise underscored the value of clear and good quality writing on the basis that if it was easy to compose these two sentences, then that means it was probably a well written article. As Dixon (2001, p418) observed, 'a paper is well written if a reader who is not involved in the work can understand every single sentence in the paper' and similarly Kalpakjian and Meade (2008, p232) make the point that, 'when a manuscript reads effortlessly you know you have a well written paper in hand'. The exercise of summarising the paper's main message also highlighted the differences in interpretation by different readers (notwithstanding our departmental staff and students arguably come from relatively similar backgrounds and interests) and is a lesson in itself about the nature of communication skills with respect to how messages are transferred from a writer to the reader. We ended the critique of published work session by reiterating some key aspects of good writing as well drawing on our own experiences as editors and reviewers to explain the independent peer-review process employed by journals and the final steps in the publication process. One lesson to emphasise here is the importance of responding to reviewer feedback and in explaining to the journal editor how this was pursued, a point raised frequently by other writers on the journal article writing and publishing process (e.g. Weil 2004, Kliever 2005, McIntyre 2007, Kalpakjian and Meade 2008, Lambie et al 2008, Powell 2010, Provenzale 2010).

We suggest that critiquing a published paper is especially useful in the incubator experience as a means of 'narrowing the gap' between early career researchers and well established authors. In our experience participants can initially be somewhat daunted by the prospect of reviewing published work in their field of study, but the process often reveals perceived flaws or issues in writing which simultaneously boosts the confidence of learner reviewers whilst perhaps slightly 'demoting' the status they might otherwise unquestioningly attach to published authors. In this way it helps to demystify the writing process and bring it more into their perceived reach. In the Chiang Mai workshop, the critique of a first paper was led by the presenter to model the process and then for the second paper participants were expected to lead the discussion.

The second stage of the critique process was to review the draft journal article written by fellow participants (with respect to actual timing, the critique of colleague's writing necessarily took place after all participants had written their own draft journal article). Each participant was assigned two draft journal articles to review and the workshop presenters reviewed all of the draft papers submitted. The group was re-convened in a round-table setting and each draft journal was reviewed in turn (for 30-60 minutes) with discussion being lead by the two participants specifically assigned to each paper; thereafter whole of group comments and discussion occurred with typically more detailed feedback comments coming from the presenters owing to their greater experience in peer-review of writing. The authors of each paper were present of course; at the outset they were invited to briefly outline their paper to the whole group and explain their choice of target journal.

Having colleagues or other people not directly involved in the research or reporting activity review draft journal articles and subsequently using this feedback to improve the next draft prior to submission to a journal is a practice widely supported in the literature (e.g. Arceci 2004, Fisher 2005, Kalpakjian and Meade 2008, McIntyre 2007). Some of the benefits of the formal independent peer review process employed by most peer reviewed journals should arise from getting colleagues to review draft manuscripts. For example Weil (2004) suggests reviewers can be useful to authors by identifying and helping rectify errors or omissions arising from an author's inevitable limitations of knowledge or experience they bring to research and writing, and in providing a fresh perspective on other people's work reviewers can often identify problems or limitations of which the author is no longer aware. Morgan (1986, p1328) notes that, 'Getting authors to revise papers successfully may be the greatest contribution a journal can make to improving scientific communication'; which meshes directly with a core purpose of the writing incubator process, notwithstanding of course that the workshops build in a revision step prior to author's submitting their paper to a journal.

In our experience this practice of reviewing colleague's papers and collectively sharing in the discussion surrounding feedback to individual authors leads to realisation that other readers frequently don't understand what the author of a draft might have been 'convinced' was clear and unambiguous writing. This part of the incubator process underscores the advice for improving writing that is seemingly common to all writers on the subject to the effect that good writing always requires re-writing. For example the advice received by Powell (2010, p874) from prolific authors and journal editors is to "revise and revise and revise" once a first draft is completed noting that even polished authors go through an average of 10-12 drafts, and sometimes as many as 30.

The workshop participants are able to appreciate how different people interpret or react to their writing and we observed that typically they were surprised at the amount and nature of changes recommended by their colleagues including us. They are able to realise first hand the amount of rewriting that good writing entails. Because the experience is shared within the group in a supportive collegial environment as well as in terms of individual participants equally receiving similar types and levels of feedback as others in the group they realise the commonality of writing issues. One of these issues relates to a point made by Lambie et al (2008) that it is rare for a manuscript to be accepted outright on the first submission – in other words, all writers must expect to undergo revision and rewriting processes and the incubator process is a first step for new authors in coming to grips with that. Thus the workshops in which participants receive feedback on their draft journal article and participate in the reviews of others also prepares them for the peer-review process feedback that they will likely encounter when they submit their final draft manuscript to a journal.

With respect to designing and operating the review workshops, there are two important points to note here. Firstly it is important to create a 'safe' and supportive environment in which feedback can take place that is direct and honest but not hurtful or damaging. For the North-West offering, while the 'rules of engagement' were stated up front by the presenters, we also included our own draft journal article in the pool of papers allocated to participants to review; thereby placing ourselves on the same footing as our participants in this regard (in practice we left critique of the presenter's draft journal manuscript until last as the priority focus was the writing of our participants). Secondly it is useful to reiterate the advice provided by many other authors with respect to dealing with strong criticism received on papers submitted to journals, including rejection. For example Lambie et al (2008) note that getting a manuscript accepted for publication can be challenging while Weil (2004) points out that receiving a substantial set of required revisions requires additional work at a time when the writer may have felt the process was completed and it may lead to feelings of rejection or failure being experienced by the author. Even in the face of manuscript rejection, Kalpakjian and Meade (2008, p239) position the review process in positive terms, advising authors to 'celebrate success' on the basis that if a researcher is already at the stage of having something worth writing about for publication then they are already successful. They suggest viewing the situation in this manner so as not to become upset when a manuscript is rejected by a journal and also note that 'any skill takes time and practice and failure is inevitable at one time or another' (p239). Finally, it is commonly advised that authors who do receive rejection from the peer-review process for a journal, should persist and simply try again with another journal on basis of finding a better fit between the subject or nature of the paper

and the destination journal (e.g., McIntyre 2007, Kalpakjian and Meade 2008, Powell 2010). When an author gets a rejection, the advice of Kliwer (2005, p595) is to, 'pick yourself (and your paper) up, dust yourself off, reformat the paper for another journal and use the critiques of the reviewers to improve your paper'. Designing the incubator review and feedback sessions to be supportive and constructive but also truthful is important for giving participants some initial skills to prepare for major revision or rejection scenarios in the future.

Participant paper writing

Following the session in which previously published work was critiqued by the writing incubator workshop participants, a period of three to four weeks was set aside to allow each participant to complete the writing of their own draft manuscript. A firm date for submission of the drafts was set, timed to be several days before the workshops in which participants discussed their critiques of the colleague's papers assigned to them. In the busy world of academia, it is easy to postpone research writing in the face of apparently more pressing teaching and administrative functions. In terms of ensuring that writing actually happens, Kliwer (2005, p591) states, 'Decide to write the paper' [and] 'Make a timetable for doing so'. The writing incubator workshops create the structure or timetable for writing, especially completion of writing. By signing up to the workshops in the first instance, each participant is making a commitment to writing. This is possibly the single greatest benefit of the incubator process. Even if the initial draft of a completed manuscript circulated to fellow participants is a bit rushed or 'rough', significant progress has been made towards completion of a paper and the support and enthusiasm of the presenters and colleagues can create sufficient momentum or competitive incentive to follow through with article writing.

The quality and completeness of participant papers submitted to the collegial critiquing process does of course vary tremendously. In large part the variation is a factor of the relative experience of the individual author (e.g. a Masters student writing their first journal paper versus an existing academic staff member who has previously published one or two papers) as well as the level of advancement of the research programme itself that is being written up. It is up to the presenters to determine what level of ongoing engagement they will have with individual authors after the critiques from colleagues workshops. In both incubator iterations, the lead author had meetings and provided written feedback and inputs on one or two further draft manuscripts with some individuals. In the North-West case, several participant writers invited the workshop presenters to co-author their particular paper on the basis that the inputs were significant enough to warrant this (and it was appropriate in light of the greater conformity of expertise of the presenters and participants with respect to fields of study which was not the case for the Murdoch incubator).

For the Murdoch iteration, the critique sessions marked the end of the formal programme for the incubator, although we did undertake follow-up with the participants months and one year after this in an attempt to learn how many papers eventually were submitted and accepted for publication in peer-review journals. We were aware that some individuals ceased the journal paper writing process at the end of the feedback session in order to focus on their ongoing research, often involving PhD thesis writing. This meant that the enthusiasm and momentum generated through the writing incubator process waned. Overall, one year on from the Murdoch offering, we could ascertain that four papers had been submitted and/or accepted for publication in peer-review journals. We are confident that another three will be submitted.

In light of this, for the North-West iteration a 'fixed due date' for submission of manuscripts to journals was part of the process and this was included in the initial email of invitation. This date was set three weeks after completion of the critique sessions (chosen as the day before the lead author had to depart the country). A 'prize-giving' social event marked the due date for submitting manuscripts; participants were encouraged to bring along proof that they had submitted their manuscript to a journal in exchange for 'free drinks'. This strategy appears to have been successful. From the initial nine participants in the first workshop session in the North-West writing incubator (one of whom subsequently dropped out), seven draft papers were included in the collegial critiquing process and by the 'due date' three weeks later four papers had been submitted to journals, while at least two more

were very close to being ready for submission at time of writing. Furthermore one participant wrote two book chapters during the period of the incubator workshops rather than a journal article (because of the differences in style, we decided not to include the chapters in the collegial critique process and with seven draft journal papers we already had plenty of work cut out for everyone!).

It should be noted that for the North-West offering, the two presenters also co-wrote a paper that was included in the incubator process; this meant we were 'walking the talk' and not falling into the trap of 'do as I say, not as I do'. This was not the case for the Murdoch offering and might in part explain the rapid and relatively high writing outcomes achieved at North-West. It should be pointed out though that one possible consequence of having the presenters include their own writing in the incubator process may be a reluctance of participants to critique this work; a lot depends here upon the relationships between the presenters and participants. We surmise that including the presenters' manuscripts in the review process may inhibit critical examination in some cultural settings but not in others.

Journal writing incubator outcomes and participant feedback

The outcomes of the Murdoch and North-West journal writing incubator workshops with respect to published papers has already been accounted for. In this section, we focus on other outcomes of the process, drawing upon the feedback received from our participants. With respect to 'methodology', we simply asked participants to provide us with feedback on their experience; in doing so we reminded them of the three stages of the incubator process to enable specific feedback to emerge on each of these. We present our 'results' accordingly, and in the 'voice' of our participants as per the comments returned to us.

Feedback on the learning experience

Incubator participants had much to say about the experience of learning about the writing process. Because the feedback was obtained at the end of the entire workshop series, some of the comments can be seen to reflect learning beyond just the initial workshops targeting general writing skills. The view that clearly emerges is that participants strongly value this opportunity as the following remarks demonstrate.

It is my opinion that in general, this aspect is one of the most neglected skills development imperatives at universities, especially for junior staff. I suspect that there may be an assumption that many of the skills are covered by post graduate training but this is not the case. The world of journal article writing is central to the career development of academic staff yet initiatives like this are few and far between. Events/skills development opportunities like these avoid 'having to learn the hard way' and provides pointers to writing journal articles which is pro-active, inspiring and plain fun.

This was a most informative process - and also inspiring, as there were 5-6 colleagues all on the brink of finalising their articles.

With my limited experience of writing a journal article, I believe the workshop (notes, articles circulated etc.) has improved my writing skills and will definitely guide me in future writing. The workshop clearly sets out what needs to be considered during the publishing process and what makes a good paper. I am excited about writing more effective articles!

To be exposed to the writing/publishing process were insightful and a great learning experience. The workshop was concise and to the point. The companion material were relevant and contribute greatly to the understanding of the writing/publishing process.

From the perspective of a presenter, it also is powerful for us to research the topic and to reflect on what makes good writing. Some participants singled out particular aspects of the learning content that they felt they benefitted from most.

The workshop gives participants invaluable knowledge through focused, uncluttered, to-the-point lectures and accompanying notes; which in essence saves participants days, maybe even months of preparation. The criticising part of the workshop at the beginning is an eye-opener for considering and thinking about article structure, target audience, and what is considered to be relevant and quality writing.

[The presenter's] article 'Writing About Writing' is really an excellent piece of work - which makes comprehensive references to other authors' publications on academic writing and publishing. This article ably distils the work of so many accomplished published academics, that somewhere in there someone must be telling the truth and it's worth taking note of!

I learn a lot of writing skills from the Writing Workshop, I used it not only in improving my English writing, but also in Chinese writing, and in my guiding as well. It is hard to tell all merits one by one of writing workshop, because it is so helpful for me, I want to pick one for example here, when I guide my students' writing, I can tell a good abstract should include which information to make it clear and perfect.

Participants were appreciative of having experienced authors, reviewers and editors presenting and participation in the workshops.

During the workshop I gained valuable insights into the inner workings of the article publishing process, especially the editor's perspective. For a young aspiring academic like myself this is crucial information which definitely influenced my way of thinking about writing and the approach that I will follow (or not follow) in the future.

I thought it was very useful to have a lecture by an experienced author and editor, to teach and refresh the principles and techniques of writing an article.

It definitely helps to know how editors will be thinking and approaching one's written work, as this helps tweak the article to make the most impact.

I personally found it very useful to be able to speak directly to the editors of a journal (who are also experienced authors in their own right) about how they see incoming submissions and how they see the audience of the journal. That provided a very valuable perspective on conceptualising and submitting a manuscript.

Scientific writing has the potential to become dry, dull and mechanical notwithstanding strong exhortations in the published literature that this should not be the case (e.g. Brown et al 1993, Kalpakjian and Meade 2008, Lambie et al 2008). Issues surrounding creative and engaging writing as well as matters of tone and style were targeted in the initial workshops on learning about writing, and some of our participants singled out this aspect in their feedback as follows.

The journal article writing workshop helped me to understand that writing about science does not mean that it should be boring. It taught me to approach scientific writing creatively.

The presentation on writing made me reflect upon my own writing in ways that I had not necessarily done before. The use of quotes from other authors writing about writing made the presentation come alive, and it was really helpful that some different views and perspectives were presented - this led to good discussion amongst the group.

This last example underscores the value of modelling good practice when teaching and of course simply reiterates principles of good scholarship that a range of original sources should be utilised and acknowledged to put together a body of knowledge.

Feedback on the critiquing experience

One of the purposes of the critiquing exercises was to encourage participants to tune into thinking critically about writing so as to be able to apply such an approach to their own writing; this appears to have been a successful outcome of the incubator workshops.

The exercise of doing a critique on a published paper was also very stimulating in sharpening critical skills, with a view to applying them to my own writing.

The workshop made it possible to critique my own writing process, therefore identifying the shortcomings. It provided skills that will definitely be helpful for the future.

Seeing my own work being torn apart publicly (but luckily in a small and familiar enough forum) really drove the message home and helped me to also focus better (more critically) when reading other authors' work - not only that of my colleagues at this workshop, but also more generally when reading articles. In other words, I think that this workshop has honed my own 'review skills' and made me a more critical reader in general. I now look for the essential structure, impact and flow in argumentation in most things which I read.

A key benefit of critiquing the work of colleagues is that it helps academics within a faculty know and understand better what their colleague's research activities involve and in developing a sense of the faculty working collaboratively together as the following feedback comments demonstrate.

Critiquing the papers written by my colleagues not only gave me an idea of what they are currently researching, but it was also helpful [critiquing] examples of journal articles written by academics with years of experience.

Reviewing my colleague's papers provided me the opportunity to apply some of the new skills/knowledge I have acquired. It was very interesting to see what everyone is busy with and what their interests are.

This has been the first opportunity ever, that our subject group sat together and discussed each other's research. Even if this was the only outcome of the exercise it would have been worth it. ... It is also safe to argue that the event created a sense of camaraderie and teamwork.

Some participants were relatively experienced journal article reviewers already; however, they too reported benefits of engaging in the structured critiquing exercise conducted in the workshop setting.

As someone who regularly reviews paper, I found that the material presented in the first session really helped me to focus in on critical aspects of others' writing in reviewing their papers, and to pick up things I might not otherwise have done. The atmosphere in the group was very collegiate and supportive - great!

Conducting a critique of the article written by another participant wasn't a new exercise for me, since I have reviewed papers for journals. However, it was really good to hear multiple critiques on the five or six papers dealt with during that session. The repeated emphasis on certain key elements of good papers was sobering, that was very good. It was also encouraging to note that other authors struggle with the same issues.

I would like to emphasise the value of peer-to-peer review in a writing workshop. It is always much easier to spot mistakes of others than your own. Some sessions for workshop participants, provided with some guidelines, to review each other's manuscript should be very useful. Participation in development of the guidelines should also be very useful. This could include a list of 10 things (or whatever) you can easily do to make editors not reject your manuscript right away and reviewers be kindly disposed to your paper!

The public critiquing process can be quite confronting. As previously indicated, it was important for us as presenters to establish clear 'ground-rules' for providing reviewer feedback to colleagues. Above all else we stress the need to be constructive and helpful in terms of improving a colleague's writing practice and journal paper, rather than just picking out faults or problems. The presenters have a critical role in modelling this approach to the group. So far we have managed this process successfully and participants have been supportive of their peers.

Receiving feedback from my colleagues was an eye opener. It was immediate, honest inputs that I could directly apply to my article.

Nobody likes it when their work is being criticised, but in hindsight it was such a valuable learning experience. The process of critiquing a colleague's paper not only develops your own critiquing skills, but also develops your writing/reasoning skills.

I received valuable feedback from the colleagues that reviewed my paper and I appreciated the straight forward but friendly approach.

This was a rather masochistic exercise but also very revealing, informative and Helpful; it enabled me to fast-track and to get it right! From this process I also learned that most colleagues were rather diplomatic in their critique (including me), but the editor's review comments were the acid test and really focused us onto the nitty-gritty of what is required.

One participant at North-West, himself an experienced academic of many years, when reflecting on the role of the presenter in a private conversation with the lead author after the event framed the situation as a sporting analogy. He suggested that the presenter must take on a combined role of 'coach' and 'umpire'; on the one hand urging participants on to greater achievement whilst at the same time managing the teaching and learning environment so as to ensure equity for all participants.

Feedback on the journal paper writing experience

The most common feedback about the writing process was tied to the discipline of meeting a structured deadline, thereby effectively requiring authors to write. There was also a sense that having the critiquing process carried out with colleagues would ultimately save time for the author, by addressing matters that otherwise would be raised during a journal peer review process.

Being fresh to the formal academic world (apart from being on the receiving end as student) I found the workshop tremendously helpful. I had no prior article writing experience and the workshop gave me the tools and know how to write my first article. Thanks for this!

The set deadlines forced me to make the writing of my paper a priority.

Writing an article as part of the workshop was rewarding because it was done according to a strict time line. I found that the workshop was a great initiative to get a couple of articles published in our department.

This was the most exciting part of the workshop. Sometimes a good dose of pressure is all you need to finish a paper. The structure of the workshop provided just that along with comments and suggestions from colleagues which saves a great deal of time (seeing that these suggestions/comments might only have surfaced during the peer review process).

This part of the workshop was vital, because it made everything else that had been said more relevant, and gave opportunity for implementation towards a real and important target. The comments received from co-members was intrinsically highly valuable towards improving the shape and content of my manuscript. Without this part of the exercise, I think that most of the previous learning would have been lost.

It is interesting to note the linkage made in the final response above to the learning process; in other words, the writing process established in the journal writing incubator process represents deep learning by consolidating the theory learnt earlier in the workshops through direct application in writing. The supportive learning environment established in the incubator workshops was also important for assuaging the fears of new writers, especially those from a non-English background as the following comment highlights.

People are generally very scared of writing (in Thailand they blame it on their problem with English – but it is no different with writing in Thai). So the writing workshop is a really good place to get them started, as help can be expected, and you can be less afraid of not getting it right.

As journal editors, we would further suggest that a benefit of the journal paper writing and critiquing component of the incubator workshops is that it is likely to increase the chances of acceptance of

papers by journals. This is not to say that participants could hope to have their papers accepted by a journal peer review process without further changes or rewriting being required, but more a case of increasing the likelihood of authors passing safely over the first hurdle of the publishing process – that of the journal editors considering the manuscript to be good enough to be sent out for peer review, and not to be rejected up-front. We would not expect new authors to be aware of this benefit and therefore are not surprised that it does not feature in participant feedback.

Other feedback from incubator participants

We received a range of other feedback comments from our participants that we believe are worth noting and provide a brief reflection on each. The first recognises the fundamental importance of writing to an academic career and the value of the incubator process in directly supporting that:

[a] main positive outcome of the workshop has been the urgency it created. In most instances research and article writing are marked 'important but not urgent' on the to-do lists of academics. The workshop assisted to move article writing to the 'important and urgent' category. Of course the exercise also facilitated mutual learning which is particularly important for younger researchers. The point is that in the greater scheme of things an academic can hardly claim to have spend more productive time on anything else than being involved in the workshop.

It was previously noted that the Murdoch workshop arrangements did not include an insistence on completing journal papers and actually submitting them for publication as part of the formal structure or timing of the writing incubator. Similarly, we did not require that participants should complete an entire journal article draft for the critique process. This point was seen by one participant as a weakness in the design of these workshops as the following example demonstrates (and it was something rectified for the North-West offering).

In my opinion, many students or staff will have interest in learning how to improve their writing, but for better outcomes, all attendees should prepare one article, [a] finished manuscript, not half prepared.

The incubator process itself as a teaching and learning approach was singled out for attention by one participant as follows.

Compared with, say, a lecture on how to write, the workshop was much better in resolving key issues that need attention, especially in helping people to focus on their own work.... I think the chance to work on your own real manuscript is a bit like learning statistics from doing the analysis of your own dataset that you are trying to get meanings from, which works much better than learning it in the abstract from some classes.

It is definitely true to say that we worked the participants in our writing incubators very hard; it was an intense and, at times, thoroughly exhausting process for all involved. Nevertheless, they do appear to be a resounding success as the following participant feedback comments make clear.

I am thankful to have had the opportunity to attend a workshop like this at the start of my academic career.

I will definitely recommend this course to other PhD students or new post-docs

I will participate in the workshop every time it is presented in South Africa as it is an opportunity in research not to be missed.

I'd wholeheartedly say run the workshops again. I liked the set-up and presentation of the course, and still have the handouts sitting on top of my cupboard at home. I'll refer to them for years to come I think as a good checklist. Definitely run them again, it was really helpful to have advice from [the presenters], who have published so much.

As a presenter, it is of course exhilarating to get this kind of feedback, and in itself is a good motivator for us to hold future journal writing incubator workshops; notwithstanding our belief in the range of benefits we believe this approach to teaching writing skills delivers – we summarise these benefits in the next section.

Conclusions

This paper has described our experiences as academics in running journal article writing incubator workshops with postgraduate research students, post-doctoral fellows and relatively 'young' or new academics. The process was engaging and inclusive resulting in a high retention rate of participants. We derived the substantive content for the incubator from our own experiences as authors, reviewers and journal editors in conjunction with views derived from the extensive international literature on the topic of journal article writing skills. As the title of this paper makes clear, two major outcomes of the incubator approach were to teach and improve writing skills whilst at the same time enhancing research productivity through submission of manuscripts by participants to peer-reviewed journals. Other benefits have also flowed from the incubator workshops including:

- collegiality and relationship building within busy faculties where people may not otherwise get together often;
- participants learning what colleagues are doing, including gaining exposure to other avenues of research;
- developing confidence and 'hands-on' experience with writing and reviewing skills for upcoming and newer academics;
- modelling good writing practice and prioritising writing as an important activity for academics with busy professional working lives; and
- inspiring researchers to be more creative and proactive with their writing practice, treating it as an enjoyable and rewarding part of academic life rather than an essential hurdle for career advancement.

Thus we achieved the five intended outcomes for the incubator workshops identified previously and more besides. The support from our participants has been overwhelmingly positive, including requests to host more journal writing incubator workshops in the future. For our own part as presenters, the experience is simultaneously challenging and rewarding. Therefore we have no hesitation in recommending the journal article writing incubator approach to fellow academics as an effective and successful teaching and learning strategy that simultaneously enhances writing skills and research outputs.

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