

**ACADEMY OF SCIENCE OF SOUTH AFRICA (ASSAf) IN PARTNERSHIP
WITH THE INTERACADEMY MEDICAL PANEL (IAMP)**

**Proceedings Report for the Scientific Writing Workshop
4 – 6 March 2008
Pretoria, South Africa**

1. Introductions

The Academy of Science of South Africa (ASSAf) hosted the 2nd Scientific Writing Workshop for 20 young scientists from Southern African countries. The workshop took place on 4 – 6 March 2008 in Pretoria, South Africa. The participants were from Lesotho (3), Botswana (5), Swaziland (1), Zimbabwe (2), Namibia (3), Mauritius (2) and South Africa (4). The Workshop was chaired by Simon Rambau and the facilitators included:

Prof Anthony Mbewu, who gave an introductory talk and introduced the theme for the workshop;

Prof Wieland Gevers, who provided participants with the background on essentials for scientific writing;

Dr Graham Baker, who shared his experience as an Editor of South African Journal of Science;

Ms Christina Scott, who gave a presentation on communicating scientific writing to the public; and

Ms Etrisia du Plessis, who on behalf of Dr Robin Drennan provided participants with information on how to access research grants.

(The scheduled keynote presenter, Prof Raja Subramanian from Mauritius, unfortunately had to cancel his trip to South Africa because of family commitments, and participants thus missed out on one of the most important topics entitled “Scientific Writing- a Pedagogical approach, and Writing with a Purpose”.)

The workshop was structured in such a way that it would allow presentation by experts interspersed with presentations and discussions by participants, since some participants had completed their doctoral studies and were struggling with publishing articles, some who were still doing doctoral studies, and some that were doing Masters Degrees or had just completed their Masters degrees. The combination of these different levels of participants in one workshop posed both challenges and opportunities since the participants were able to learn from each other. In order to ensure full participation of all candidates, a premeditated grouping system was followed to balance their levels of experience. The deliberations were interesting and lively, with participants putting in much effort to ensure that they benefited as much as they could.

2. The Workshop Proceedings

2.1 Opening Remarks and Welcome

In his opening remarks, Prof Anthony Mbewu informed the participants that Africa was experiencing challenges of publication from its medical fraternity. He suspected that

medical practitioners in the field were often not recording their work and thereby not letting other scientific communities know what was happening in Africa. This had led to the disappearance of the base created in earlier centuries which indicated clearly that science was not new in Africa because great discoveries had been made on this continent, for example considering the many discoveries and inventions made by the ancient Egyptians. If this discoveries were not recorded we would have lost a wealth of inventions which laid foundations for later discoveries..

2.2 Expectations for the Workshop

The participants were asked to break into four groups and to list their expectations for the workshop. The following expectations were listed by the participants:

Group 1

- To conceptualize a researchable topic
- To identify significant research
 - To contribute to the body of knowledge, value
- To understand the process of research
 - Formulating data collection, analysis
 - Writing
 - Reporting- peers, other agencies
- The workshop should contribute through:
 - Becoming an “Eye opener”
 - Enhancing Collaborations among participants and their institutions
 - Providing skills for critical readership capacity
- Grant writing skills: How to go about drafting the proposal for funding.

Group 2

a. What do we want to achieve by the end of this workshop?

- A clear understanding of what is “Scientific Writing”, and all the principles it entails
- How to access funding for research
- How to put together a scientific paper
- Knowing how to identify the relevant journals
- Understanding of the content and context of scientific writing course
- A follow-up strategy, with participants to sustain the momentum

b. How can we achieve that?

- Mentoring and collaboration with local, regional and international researchers
- Developing a culture of publishing
- Mentorship

Group 3

- a. To sharpen writing skills and subsequently get funding and increased chances of publishing
- b. To form a network between all participants thus enabling expansion of individual professions (by using all the different professions here)- networking would be via email – this system can also be used to peer review articles before sending them for professional peer review
- c. To increase skills in reviewing articles and to assess if those of us who have been reviewing are doing so correctly
- d. To obtain advice and guidance in locating specific journals and departments that are recommended for articles submission as well as locating funding sources - this includes advice from ASSAF and their role in publishing
- e. To be informed on patent rights and how to go about it
- f. To know how to launch new journals and to recognize existing ones

Group 4

- a. Access to research funds- how to write good proposals that can be considered for funding
- b. Be in a position to write a good article that can be accepted for publication - have guidelines on scientific writing
- c. Be able to write research-based reports in a scientific language that can be understood
- d. Be assured that the ISI (Thompson Scientific Index) will be implemented as soon as practicable.
- e. The requirements for participating in the proposed on-line scientific writing course

2.3 Introduction to Scientific Writing - Prof Wieland Gevers

Prof. Wieland Gevers described the Academy of Science of South Africa's consensus study report on a strategic approach to research publishing in South Africa, and highlighted the importance of the issue of visibility of research papers enhanced by a combination of appearing in listed/indexed journals, publication in high

profile/impact/circulation journals, inclusion in widely read, focused, mono-disciplinary and large size journals, and e-publications in open access mode, in journal repositories, amenable to intelligent search and harvesting by wide variety of users.

Prof. Gevers further took participants through what he called the World Knowledge System and explained in detail why the concepts below are essential in scientific writing discourse.

- Originality
- Consistency of Methods
- References
- Thoroughness of data
- Citation
- Authorship
- Brevity and clarity

2.4 Scientific Writing: A Pedagogical Approach

Since Prof Raja Subramanian was not able to attend the workshop, the participants were given an article titled “The Science of Scientific Writing” to prepare overnight for discussion first thing the next day.

2.5 Recap for Day 1 4 March 2008

Opening Remarks – Prof. A. Mbewu

- Importance of scientific thinking to solve everyday problems e.g Energy crisis
- Academies as forums where professionals come to discuss scientific ideas
- “Science is useless unless it is communicated”
- Writing science is central to scientific communication
- Electronic communication – newsletters, Internet
- The need to protect one’s ideas - Intellectual Property (patents and copyright)
- Role of the Inter Academy Medical Panel

Introduction to Scientific Writing – Prof. W. Gevers

- The World Knowledge System
 - Originality
 - Consistency of Methods
 - References
 - Thoroughness of data
 - Citation
 - Authorship
 - Brevity and clarity
- Role of the editor
 - Editorial policy
 - Assessment of reviewers’ reports
 - Statistical review
 - Protection of focus of the journal
- Peer Reviewers

- Scrutiny of methods & results
 - Identify gaps
 - Suggestions on how paper could be improved
 - Assess proper citation and referencing
- **Strive to**
 - **Publish in respected, peer-reviewed journals**
 - **Reach the largest possible readership**
 - **Stimulate scientific thinking**
 - **Use anti-plagiarism software**

2.6 How to Access Research Grants – Etrisia du Plessis

Ms Etricia du Plessis made a comprehensive presentation on what the requirements are to apply for research and grants, and what is entailed in preparing a convincing proposal for grant applications. The presentation was interactive, with participants asking questions to the presenter. Slide handouts were distributed to participants detailing NRF example and guidelines for applying for grants.

2.7 Recap on Lessons Learnt for the Day

In summarizing the deliberations of day 2, Ms Sphiwe Madiba (participant) presented the record for 2nd day deliberations by participants as reflected below:

Day 2 Morning session

A short discussion over the science of scientific writing article

- Challenges of ensuring that the audience understands what the writer want to say
- Interpretation of text depends on many things- the context and the background of the reader

Group sessions

The groups were tasked to critically analyze the scientific writing article

- There were some similarities and differences in the approach and outcome of the exercise
- Debate on meaning and interpretation of new and old information/interesting and dull information- this just confirmed what the article tried to highlight that

“We cannot succeed in making even a single sentence mean one and only one thing; we can only increase the odds that a large majority of readers will tend to interpret our discourse according to our intentions”

Second session

Presentation on writing a successful Research Grant application - Ms Etricia du Plessis from the National Research Foundation

Outlined the phases of proposal writing

- Preliminary grant activities
 - Know the appropriate funding source
 - Know the funding criteria- different for each funding source
 - Access copy of grant holders

- Planning and writing phase
 - Ensure proposal fits with mission and vision of funding source
 - Know the proposal guidelines
 - Find out the evaluation process
 - Know the internal and external requirements
 - Checklist of submission
 - NRF will assist in every possible way

- Proposal submission
 - Have a catchy title
 - Impress the evaluation panel
 - Be competitive
 - The summary is very important- evaluators read this
 - Know evaluation process
 - NRF work on deadlines

Other issues

- Subjectivity /objectivity of National Research Foundation
- Rights of grant applicants – legal requirement
- Know the vision and mission of the source of funding
- TWAS as an international funding agency

Key to scientific writing is

Making sure people understand what you want to say

2.7 Communicating Scientific Writing to the Public

In her presentation, Ms Christina Scott stressed that participants should be aware that scientists and journalists have different modes of thinking; should remember the importance of a good sense of timing; using appropriate language from fellow scientist and the media; being accurate but clear; etc etc There is often conflict and a lack of cooperation. The following phrases summarize the discord:

“Scientists are slow, careful with every word, frightened of reporters, guarding their reputation, worried what other scientists will say when the story appears, they tend to think that everyone already has a PhD and that everyone knows the word ‘geodesy.’ and are always too busy to be interviewed. Their conclusions are at the end of the article. On the other hand reporters put conclusions at the beginning. Replication is fast and sloppy, understand their target audience far better than the science involved. They know how to grab the attention of a reluctant audience and need to explain to the taxpayer what’s being done with their money – in ways that make sense to the taxpayer. They usually have five minutes left before deadline.” Christina Scott, SciDev Science Journalist

2.8 Panel of Experts

The workshop was closed by a panel of experts who responded to questions from delegates. The session was meant to compensate for any of the expectations that might not have been met through discussions and presentations. During this session it emerged that one of the expectations that was not met was for an expert to practically engage the participants in identifying a potential research problem, collecting and analysing data and writing a report. The experts pointed out that participants should be aware of the differences of writing a thesis and a research article. The former (thesis) is research work done for Masters and Doctoral studies, supervised by a promoter or mentor who apply varied styles based on individual, institutional and country requirements, while the latter (article) is for any researcher (including the doctoral and masters’ students). Questions asked ranged from identifying a topic, editing, peer review, how to cope with manuscript rejections and accessing research funds.

2.9 Way Forward – Online Scientific Writing Course

Prof Wieland Gevers informed the participants that there is an exercise currently being proposed to ensure that the present workshop’s effects were sustainable and touched base with wider communities of young scientists. He asked whether the proposal would be feasible based on their experiences from their respective countries. The response was positive, with most participants agreeing that an online course system would make a difference for their institutions, and would complement in-house training provided on scientific writing. The participants were informed that experts from their countries would be invited to participate in a planning workshop that would develop the content of the online course system and outline the process of implementation.

3. Response from the Evaluation Forms

A questionnaire was distributed to learners to evaluate the workshop. The evaluation forms asked participants to answer questions on whether the workshop fostered the exchange of information on the major problem of scientific writing, whether it addressed critical issues in scientific writing, deepened their understanding of the process involved in the application of research grants and ideas on editing of scientific writing. The response from participants was that the workshop generally was useful and deepened their understanding of issues involved in scientific writing. Some participants however indicated that their expectations of doing actual writing was not met and they would like to be involved in a follow-up activity.

4. Conclusion

The scientific writing workshop provided the Academy with an opportunity to interact with its Southern African counterparts and to ensure that there is networking among the young scientists. It created a base with which the participants could collaborate with each other. Even though there were hurdles, the workshop was a success and participants strongly suggested that either another session should be organized or some form of engaging young scientists within the region should be arranged.

5. Contact details of participants and facilitators

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