

Writing for peer reviewed journals on health equity in Uganda

Report of a training workshop



**Training and Research Support Centre,
Coalition for Health Promotion and Social Development (HEPS)
Uganda, Makerere University
and African Health Sciences**

**in the Regional Network for Equity in Health in east and
southern Africa (EQUINET)**

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1. Background to the workshop

The Uganda Health Equity Network was born out of a conference organised in Kampala on 27-28 March 2008 to reflect on Uganda's record in challenging inequity in the health system. The conference was jointly organised by the Regional Network for Equity in Health in east and southern Africa (EQUINET), HEPS-Uganda, and Makerere University's School of Public Health. It attracted civil society organisations (CSOs), non-governmental organisations (NGOs) and researchers. The conference provided an opportunity to share knowledge, identify lessons learned and gaps for future research and action.

At the end of the conference, participants launched the Uganda Health Equity Network as a platform for continued networking on the deliberated issues, and to build a united voice in securing health equity in Uganda. The objective of the Network is to draw together different voices to stimulate public debate on health equity issues and health policy making. A taskforce has been constituted to identify a multi-health systems equity platform that will promote a partnership between academic institutions, civil society and government, so as to strengthen development of a national equitable health system.

One of the key tasks identified by the Uganda Health Equity Network in order to take the work forward was to document the work reported at the March conference in a published form through a peer reviewed journal. It was noted that this would also build stakeholders' capacity in writing for peer-reviewed publications. The Uganda Health Equity Network and EQUINET (TARSC) agreed to hold a writing skills workshop to follow up on the conference to more widely disseminate the work. The workshop would use the TARSC/EQUINET training manual, *Writing About Equity in Health in East and Southern Africa: A writing skills manual* with resource input from a TARSC/EQUINET facilitator in planning and holding the meeting.

It was agreed that the Uganda Health Equity Network would identify a journal with which to collaborate in publishing work by researchers in the Network and in producing a journal supplement covering the conference papers. To this end, the *African Health Sciences* agreed to collaborate with the Uganda Health Equity Network and EQUINET on running the workshop towards producing suitable papers for a special issue of the journal.

Many African researchers battle to get their research published in international journals because the presentation of research is inadequate. This is problematic as Northern researchers writing about Africa succeed where African researchers fail, and thus voices from the region are not heard. The writing skills workshop aimed to improve the writing skills of Ugandan health equity researchers to enable them to seek publication of the materials produced on health equity, as presented at the March Conference or implemented as work in EQUINET in peer-reviewed journals, specifically *African Health Sciences*.

The specific aims of the workshop were to:

- give researchers an overview of scientific writing, peer-reviewed journals and the purpose of peer-review, and how this is pursued at the *African Health Sciences*;
- develop a sound understanding of the structure of scientific papers among participants, particularly as pertains to articles in the *African Health Sciences*;
- assist researchers in planning their writing in order to ensure publication in the *African Health Sciences*;
- practice writing skills and write a draft article for the *African Health Sciences*;
- develop experience of receiving criticism and support from other writers and from the facilitators, including the editor of the *African Health Sciences*; and
- develop a way forward for mentoring researchers in their writing as well as steps to publication in the *African Health Sciences*.

2. Welcome and introductions

Rosette (HEPS-Uganda) welcomed everyone to the workshop. She briefly spoke about how the workshop came about after the conference in March 2008, which set up UHEN. She said that skills development was an important way to build and strengthen the UHEN network, and as such, this workshop – the first as part of UHEN networking – was an important milestone. She also indicated that HEPS-Uganda was benefiting enormously from its collaborations with EQUINET and Makerere University, and she hoped the workshop participants would also further benefit from the collaboration, which would hopefully lead to successful publication of the March 2008 conference papers in *African Health Sciences*.

On behalf of the School of Public Health at Makerere University, Dr Chris Orach, opened the workshop. He explained that it was important for everyone working in health equity in Uganda to ensure that research was being published; in line with this the collaboration with *African Health Sciences* to publish a special issue on issues related to Uganda health equity was a significant activity. He looked forward to further networking with EQUINET, HEPS-Uganda and all the people at the workshop.

Rebecca Pointer (TARSC/EQUINET) then introduced the facilitators. Prof James Tumwine of *African Health Sciences* said that he was looking forward to this important workshop. He spoke about the racism in many international peer reviewed journals, which made it difficult for African researchers and writers to secure publication; his own experience with this had led him to start *African Health Sciences*, which was now listed on PubMed. He looked forward to engaging with the participants during the workshop.

Rebecca explained that Eunice Kyomugisha (Makerere University School of Public Health) would be assisting with workshop facilitation, as she had participated in the previous EQUINET Writing Workshop in Malawi in 2007, and she had since published research done as part of the fair financing theme in EQUINET. She had also received special mention as the best writer at a conference on Avian Flu. Eunice said she had benefited greatly from the previous workshop and encouraged participants to actively participate so that they could learn a lot. She was also looking forward to learning more about writing.

Mulumba Moses (HEPS) and an EQUINET steering committee member had also participated in the EQUINET Writing Workshop in Malawi in 2007, would assist with facilitation and mentorship, and was responsible for administrative matters related to the workshop. Mulumba said a lot of work had gone into developing the workshop, and he hoped the workshop would therefore be successful. He said that the workshop was an important activity for health equity networking in Uganda, and he was sure that the collaboration with *African Health Sciences* would be fruitful.

Rebecca introduced herself and explained her role in EQUINET, the reasons for developing the writing workshop, and the aims of the workshop. She referred participants to the programme and outlined the activities for Day 1 (see programme in *Appendix 1*). She then asked the participants to introduce themselves (see participant list in *Appendix 2*), starting with a writing activity. Participants wrote down what they hoped to learn at the workshop and one thing about themselves that they didn't normally tell other people. Participants were then asked to read what was on their papers. Many participants found this activity tricky as they wanted to say things which were not written on the paper. Rebecca highlighted that it was important to write everything down, as it was no good to have information in your head that the reader could not access.

After the introductions, Rebecca proceeded to explain the link between research and writing.

3. An introduction to scientific writing

The focus of the first morning's activities at the workshop was learning about the definition, purpose and structure of scientific writing, as well as the writing process.

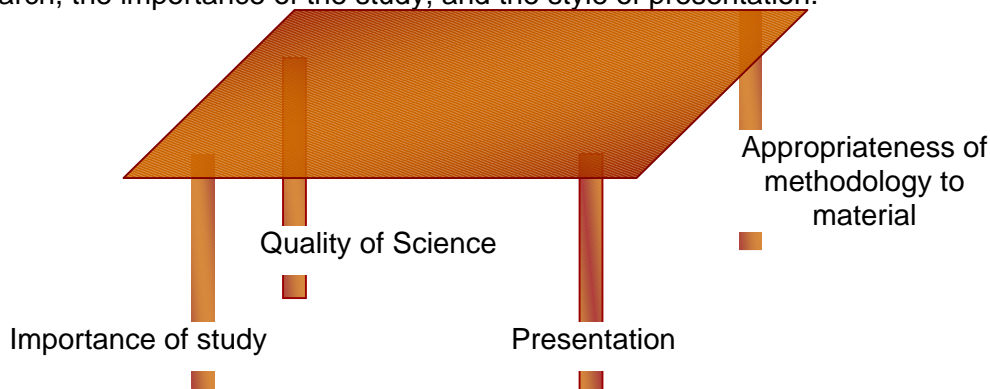
3.1 The link between research and writing

Rebecca explained the link between research and writing to building a house. When building a house, first you scope the land you choose the land you are going to build on (**choose your research project** based on a research question). After that you develop a plan for your house, just as you **plan your research** and put your plan in writing as a **research proposal**. When you start research, you **dig for information and data**, which is like digging the foundations for the house. Once you have completed research, you need to **analyse data** and then **develop a writing plan**, which forms the foundation of your writing; this is like building the foundations of the house. Putting up the walls of your house is like **writing the first draft**. You need to make sure you write **accessibly**, so that the reader can understand the writing and the research; this is like putting the doors and windows in your house. When you **edit your first draft** and **write the next draft**, this is like putting the roof onto your house. You need to write and edit **several drafts**, before you finalise your writing. **Preparing your document to submit** to a peer review journal puts the finishing touches on your writing, which is like painting the house, putting down the flooring and installing all the fittings. **Submitting to a journal** and **receiving a positive response** is the cherry on top, like putting a chimney in the house. Once your **paper is published**, you can live in the house and now you're really smoking! (A figure explaining the link between research and writing is on page 7 of the manual.)

3.2 What is scientific writing?

Professor Tumwine explained that scientific writing **answers the research question**. Research writing presents evidence, based on the data collected during the research process. Many research writers make the mistake of thinking that the purpose of research writing is to present the findings of their research; however, in scientific writing, you should also **explain the significance of your writing**. Many scientific papers are rejected by journals because they do not explain the significance of the findings.

Scientific writing begins with research. Research begins with asking a question, designing a study to answer the question, collecting information and then analysing the information. Poorly designed research leads to poor writing; some researchers do not define their research question clearly enough, and instead embark on a 'fishing expedition'. This makes it difficult to know how to write about your research, since it has no clear purpose. Good scientific writing is based on quality science, the appropriateness of the methodology to the research, the importance of the study, and the style of presentation.



(More information on scientific writing can be found on pages 15-16 of the manual.)

3.3 What is peer review?

In a plenary session run by Prof Tumwine, the participants identified that in scientific writing peers are people who work in the same field, who have similar experience, and who are also published authors and respected persons in the same field. Whether or not your paper is ultimately accepted by a journal, comments from the peer reviewers should help you further improve your writing skills. A peer reviewers' work is to **review** a document, which means they need to look over it and give feedback on:

- the validity of the research;
- any gaps in the research (or write up of the research);
- the accuracy of the collected data and the data analysis;
- whether the references are relevant and up-to-date; and
- whether or not the research is new and therefore suitable for publication.

Peer review ensures that you are producing research that is relevant to the field in which you are working. However, sometimes peer reviewers are biased and therefore might reject your paper – sources of bias include personal prejudices, racism and taking a position against the line of argument in your paper. To deal with inherent bias, some journals ask authors to recommend the names of suitable peer reviewers. However, journals also aim to safeguard against bias by having submissions reviewed by more than one (usually three) peer reviewers. In the event that the peer reviewers do not agree, the journal editor makes the final decision on whether or not to publish.

Journals usually respond to paper submissions in one of four ways:

- reject the paper;
- accept the paper with minor changes;
- accept the paper provided major changes are made;
- accept without changes.

If a paper is rejected, the journal will usually give reasons for rejecting it, and regardless of acceptance or rejecting the paper, will give the peer review feedback to the author. Papers that are rejected because they do not match the content of a journal should never be resubmitted; however, if the paper was rejected because of major flaws in the paper, you can consider resubmitting it, once you have undertaken a major overhaul of the writing (based on comments from peer reviewers).

When a paper is accepted, you will receive comments from the peer reviewer, and you will need to reply to these quickly (the editor will give you a timeframe). If you do not agree with a particular comment from the peer reviewer, you may decide not to implement it in revising your paper, but then you should explain to the editor why you decided not to implement the comment. Keep in mind that it is your paper and therefore it is up to you to decide which comments are relevant. However, an editor might also decide to reject a paper if comments are not implemented without a valid reason. (You can read more about peer review on pages 73-74 of the manual.)

3.3 The structure of a scientific paper

In a marketplace activity, participants identified the main sections of a scientific paper:

- the introduction
- the methodology
- the results
- the discussion
- the conclusion.

Rebecca explained that while this is the order in which information should be presented, authors should start with writing the methodology section, followed by the results, the discussion, the conclusion, and finally the introduction. The introduction should be written last, because it gives an overview of the whole paper, and an overview can only be written once the rest of the paper is done.

Participants then identified what types of information go in each section of the paper, and facilitators gave feedback on the relevance of the items to the heading, as follows:

3.3.1 The introduction

Participants identified that the introduction should contain the following information:

- the research question;
- the rationale for the study;
- the significance of the study;
- the objectives of the study; and
- what the reader can expect in the rest of the paper.

Professor Tumwine added that for a journal article, the introduction should be about 300 words long.

More information about writing introductions for scientific papers can be found on pages 28-29 of the manual.

3.3.2 The methodology

Participants identified that the methodology section should cover:

- the study design, including the reasons for selecting that particular design, as well as who was responsible for collecting data (and if they received training on data collection);
- the scope of the research (geographic coverage and time frame, or in the case of a literature review, the search terms used for locating documents);
- data sources, including the sample population and size of the population, or in the case of a literature review, the number of documents reviewed and the place where they were found;
- the reasons for selecting the respondents, or in the case of a literature review, the criteria for determining relevance of documents;
- the analytical framework used/ methods of analysis;
- efforts made to minimise errors or bias; and
- how ethical issues were addressed.

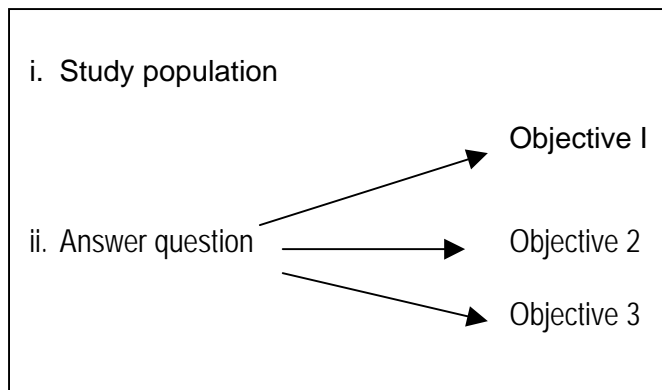
Rebecca added that the methodology section should explain the research process answering the questions Who?, What?, Where?, When?, Why? and How?.

Additional information on writing the methodology is on pages 22-24 of the manual.

3.3.3 The results

Professor Tumwine pointed out that the main purpose of the results section of a scientific paper is to **answer the research question**. Participants identified that key findings (data) should be presented in this section, as well as information about the study population and tables and graphs (or other figures) which may help readers grasp the information.

Prof Tumwine said that an effective way to present the findings was as follows:



- i. provide data on the study population – in one or two paragraphs, with one or two graphs;
- ii. answer research question/ objective 1, followed by question/ objective 2, objective 3 etc. (in the same order as presented in your original research proposal).

The results section of a scientific paper is covered in more detail on pages 24-

26 of the manual.

3.3.4 The discussion

Participants identified the following items as relevant to the discussion section of a scientific paper:

- Explain the implications of the results in a specific context, drawing on existing work.
- Link the objectives of the research with the findings.
- Confront the results with the literature in the field.
- Reference scholarly works that agree or disagree with your research findings, and link with similar/ different findings by other authors.

Rebecca added that it is important to note that you must present **your** point of view on whether you have answered the research question.

More information about writing the discussion section of a scientific paper may be found on page 26-27 of the manual.

3.3.5 The conclusion

In the conclusion, you should:

- summarise your standpoint on the research question, using catchy and punchy language;
- explain if and how you have achieved the objectives of your research;
- explain the significance of the research findings; and
- make recommendations – which should be written in a specific way, not just a series of generalisations.

You can find out more about writing conclusions on page 28 of the manual.

4. Planning your writing

Rebecca explained that attempting to write the first draft of your paper without first developing a plan is like trying to build a house without first laying the foundations. When you plan your writing, you are setting a guide to help you structure the paper and ensure that all relevant information is captured in the paper.

4.1 Accessible writing

She explained that the first step in planning to write is to identify why you think it is important to write the document, who the readers of your writing will be, and how your writing will address the interests and concerns of your readers.

Participants reflected on the following questions:

- Why am I undertaking this piece of writing?
- Who will be interested in reading this paper?
- What is the language level/ reading ability of my audience?

Rebecca explained that writing has two basic functions:

- communicating; and
- keeping records.

A scientific paper *communicates* the results of your research and creates a record of the information you gathered in the research process.

Once you have reflected on the purpose of your writing, and the readers you want to reach, the next step is to develop your key message.

(Accessible writing is discussed in more detail on page 8 of the manual.)

4.2 Developing a key message

Participants brainstormed on the three most important facts or ideas that they wanted to communicate in their writing.

Rebecca then explained that a key message should **answer the research question** in a simple, punchy statement, in less than 30 words. The key message helps writers develop a **focus** to their writing, in that every point in the writing should be related back to the key message. Professor Tumwine emphasised that the key message is the foundation of any scientific paper. Developing a key message before you begin to write makes it clear: what you want to write about, what you are going to tell people about your research, and what the answer to your research question is.

Many scientific papers fall down because they try to cram too much information into too short a space. A scientific paper is usually about 3000 words and therefore cannot, for example, contain all the information covered by a thesis. When we have undertaken a research project, we only use about 25% of our ideas/ data in writing a scientific paper. The remainder must be discarded, or used to write more papers, i.e. papers with a different key message. Any paper should only have one key message, with one answer to the research question. Other answers found can be the subject of another paper. Researchers are frequently precious about their ideas, and want to make their paper about two or three main ideas. This leads to poorly structured writing, confusion for the reader, and rejection of your paper when you submit it to a journal.

Participants then shared the three points with a partner, and through discussion, refined their key message.

4.3 Spider diagrams

Rebecca explained that writing is both a creative and a systematic process. The workshop aimed to help participants tap into their creativity and then develop a systematic process to undertake writing. To access creativity, she explained, participants should free their minds, think about their research and write down everything they can think of that is relevant to answering the research question. She said that in order to unleash their creativity, participants should not censor themselves but rather write down every idea that occurs to them. She explained the spider diagram (pages 11-12 of the manual) and asked participants to create a spider diagram for their own research.

4.4 Ranking and scoring

Once participants had completed their spider diagrams, Rebecca asked them to sort the information on the spider diagram, by selecting which section of the paper the information/ ideas should be placed in, in their papers (ranking). Once the information/ ideas were divided into sections, she asked participants to arrange the information/ ideas from most to least important (scoring). This should be written up neatly (as per the example exercise on page 13 of the manual), and this would then be the structure of the paper, i.e. the order in which information should be presented in the paper.

5. The methodology: telling the story of your research

Participants went into groups, and each person had half-an-hour to tell the story of their research, answering the following questions:

- What is the story about?
- Why are you telling the story?
- Why did you start this research?
- What question did you want to understand better?
- How did you go about finding the answer to your question?
- What answers did you find?
- What do you think is the meaning/ significance of your findings?

Other participants in the groups asked questions for clarification and to provide further details on the research, which were noted by the individuals presenting. Thereafter, participants worked in pairs (in order to mentor each other) and took time to write down the methodology section of their paper, as outlined in 3.3.2 above.

6. The results

In a plenary discussion, Rebecca went over the purpose and method of presentation of the results section based on section 3.3.3 above. She explained basic paragraph structure (referring to the example on page 20 of the manual), showing that a paragraph consists of a **topic** sentence, supporting statements and a closing sentence. She also explained that paragraphs should flow logically on from each, and showed how linking words can be used to create flow. Participants then spent time writing the results of their research.

Thereafter, Rebecca then briefly spoke about how to present tables and graphs in a scientific paper. She emphasised that these should be kept to a minimum, as they were difficult to lay out and therefore expensive for journals to produce. Tables and graphs should be presented in as simple a format as possible, without lots of colours, fancy line styles and fancy fonts, as each journal has its own style for layout of graphs and tables, and if authors made their graphs and tables too decorative, removing the decorative elements would create additional work for the journal. Rebecca demonstrated the EQUINET style for producing tables (pages 45-48 of the manual), and graphs and figures (pages 48-55 of the manual). Participants then worked through the tables and graphs sections of the computer skills module in the manual.

7. The discussion

Rebecca went over the elements of the discussion section of a scientific paper (see section 3.3.4 above). Professor Tumwine then explained that a useful way to think about the discussion section was to ask yourself:

Am I surprised by the results of the research?

If the answer to the question is 'yes', then you need to explain what is surprising about the results, and refer to other relevant studies to show how your paper has different results to other studies.

If the answer to the question is 'no' then you need to explain why the study is still relevant: there are three main reasons why the results might not be surprising, as follows:

- the study was following up on research done earlier;
- the study was undertaken in a different place to where previous studies have been done, but has similar results;
- the study is adding to growing evidence.

In answering the question, you can speculate about why you got the results that you got. The discussion section is an opportunity for the scientific writer to speculate about the results. However, speculation should be backed up by the evidence – either in terms of the data uncovered during the research process, or in terms of the other relevant literature.

Professor Tumwine pointed out that some authors use the discussion section to show off how well read they are, and use a lot of quotes from other research. However, as he pointed out, if readers wanted to read other people's work, then they would do that. In your paper you need to be original, and not outweigh your own ideas with the ideas of others. Authors should only reference other people's work in so far as it is relevant.

Pages 26-27 of the manual cover writing the discussion section in more detail.

8. The conclusion

Professor Tumwine explained that the conclusion of your paper should leave a reader with a sense of what action should be taken as a result of the findings in your research. This should be stated in a punchy, so that the reader is left with a powerful impression of your paper. People often battle with writing the conclusion section of the paper because they do not want to take a strong stand, one way or another, and are instead aiming for 'objectivity'. Prof Tumwine explained that if the author did not take a strong stand then the paper would be weak, and Rebecca added that not taking a clear stand is actually 'false objectivity' as the paper should answer the question and the discussion and conclusion should state **your** opinion on the research question.

The conclusion should be brief and drawn from the discussion section of the paper (with some repetition – in different words). It should contain no new information and bring the whole paper together in a few simple statements.

The conclusion section should begin by stating the key finding in one clear sentence of less than 30 words. The author should then clearly express the main action that should be taken as a result of this main finding.

Participants broke into groups and worked together to produce two sentences, as follows:

- **Sentence one:** the main finding of the research.
- **Sentence two:** the main action that should be taken as a result of the main finding.

The participants then presented their sentences in a plenary session, and Professor Tumwine and Rebecca Pointer then gave feedback on these concluding sentences, so that participants could word the sentences more strongly and refine their concluding statements.

Some examples of conclusions produced by participants are in *Box 1*.

Box 1: Examples of participants' conclusions

The ARV distribution system is failing people living with AIDS in Uganda. The problems are structural and systematic; therefore government needs to overhaul the entire distribution system.

The very poor and elderly who have chronic illnesses are excluded from Community Health Insurance schemes in Uganda and are therefore unable to access health services. A regulatory legal framework for Community Health Insurance schemes is therefore essential.

Government communication on and information about Uganda's health policies is inconsistent and irregular. The government should develop an effective health communication strategy to create, raise and sustain awareness of health policies in Uganda.

Health care financing in Uganda does not offer enough financial protection for the poor and those with ill health. The government should put in place a prepayment mechanism for health care financing in order to pool health risks and reduce highly inequitable out-of-pocket payments.

In Uganda donor funding underlies most of the budget for delivering prevention and treatment services for HIV and AIDS. If Uganda is to reduce HIV prevalence to manageable levels, the government must increase and sustain financing to match donor funds.

Health care financing mechanisms in Uganda are fragmented and inequitable. Government should promote equitable health care financing by establishing pre-payment schemes, enhancing cross-subsidisation mechanism and creating risk pools. In addition, government should co-ordinate the integration of existing financing mechanisms.

Sustained community participation in maternal health is key to women's improving access to prenatal health services. This can be achieved by local governments supporting continuous dialogue between community leaders, patients and health workers to address the needs of pregnant women.

Private health insurance schemes are likely to collapse with the introduction of the integrated, mandatory social health insurance scheme in Uganda. Therefore, the government must ensure that the social health insurance offers comprehensive, accessible and quality health services, so that users are not disadvantaged by the change in scheme.

Writing the conclusion is covered in more detail on page 28 of the manual.

9. Writing introductions

Rebecca went over the criteria for introductions, as uncovered in the Marketplace activity (see *section 3.3.1*). Participants then broke into groups, and using issues of *African Health Sciences* they chose one article introduction that they liked and one that they didn't like (analysing the reasons for their choice). They then presented to the plenary key factors that made introductions strong or weak, as follows:

- A bad introduction:
 - is long and wordy;
 - uses hackneyed language or jargon;

- provides unrelated or off-topic information;
 - does not explain the purpose, aims or objectives of the research;
 - does not contain a key message; and
 - includes no new knowledge.
- A good introduction:
 - is precise and to the point;
 - uses original words and conveys the author's interest in the topic;
 - has a key message;
 - explains the purpose of the research;
 - justifies the usefulness of the research;
 - explains the structure of the paper and argument; and
 - is well referenced.

More information about writing a good introduction can be found on pages 28-29 of the manual, and an example introduction can be found in *Appendix 3* on pages 122-124.

10. Abstracts and executive summaries

Participants identified the audiences for the abstract/ executive summary, as follows:

- cataloguers
- busy researchers
- journalists
- policy makers
- conference organisers.

However, Prof Tumwine pointed out that the first reader of an abstract is the journal editor. Based on the abstract, editors decide whether or not a paper is suitable for sending to peer reviewers. Editors only look at the title of a paper and the abstract before sending it for review. Therefore it is important that the abstract catch the attention of the editor. The abstract should be an 'appetiser', which encourages a reader to read further. Therefore it is necessary to keep it short and simple.

Rebecca explained that the executive summary was basically a longer version of the abstract (maximum 2 A4 pages in Arial 11pt font for executive summaries of EQUINET Discussion Papers), and should be structured in a similar way. Abstracts and executive summaries also perform a similar function, but an executive summary is usually for a longer paper, not for a journal article. Therefore an executive summary can elaborate more on the details of the study than an abstract.

Prof Tumwine then explained that *African Health Sciences* uses structured abstracts of a maximum of 250 words. This means that the abstract has headings as this makes the information more readily accessible to readers. The abstract should be structured as follows:

- an introductory sentence;
- the methods, i.e. the study design and number of respondents covered in the study (or in the case of a literature review, the number of documents accessed and reviewed);
- the key results – one or two sentences;
- a conclusion in one or two sentences.

Abstracts and executive summaries are covered in more detail on pages 30-31 of the manual. An example executive summary with explanatory text is also presented in *Appendix 3* of the manual on pages 114-121.

11. References

Professor Tumwine said *African Health Sciences* uses the Vancouver referencing style; he gave an example of how this is done. Rebecca then explained the EQUINET referencing style and referred participants to the author style guide for EQUINET papers in *Appendix 1* of the manual (particularly pages 96-97 for referencing style). Participants then broke into two competing teams and used example documents to create the references; feedback was given in a plenary session.

12. Introduction to computer skills

Rebecca presented a few beginners' MSWord tools that can be used to improve writing and demonstrated how to use the thesaurus, spell check and grammar check. She explained that the terms generated by the MSWord programme to explain grammar errors would be covered in the section on grammar skills, e.g. 'passive voice'. Participants then worked through the examples and exercises in *Module 3* of the manual.

13. Editing and grammar

Eunice explained that editing is the key to good writing, and not a job for the editor alone. If you do not edit your work, you run the risk that no one will understand what you are trying to say, and therefore, will not be interested in publishing your work. The job of an editor is to remedy minor errors in a document, not to rework and rewrite your writing. Editing is important to:

- make writing intelligent and accessible;
- ensure writing is well structured;
- ensure writing is not marred by spelling and grammar errors; and
- check (and if necessary, correct) referencing.

The craft of writing involves **technical** skills (such as structuring, grammar, good style, etc.), **passion for your subject** and **creativity** (in your original thinking and original way of expressing yourself within the confines of the type of writing you are doing). Developing your technical skills is a process that takes time and practice. In each new draft that you write, you improve, making big leaps and small changes. To develop the **craft** of writing, you need to develop a good relationship with grammar, constantly update your vocabulary, and work and play within the rules of language.

Much of English grammar has changed over time, and continues to change, however, grammar is still a set of rules to guide writing, and to aid the reader in understanding writing. Grammar errors confuse the reader and make reading difficult; sometimes grammar errors are so confusing that the reader cannot establish what you mean. Typical grammatical mistakes include poor choice of words, poor sentence structure and redundancy.

Poor choice of words means choosing words which mean something different than what the writer intends, or otherwise, choosing a complex words when there is a simpler alternative. Participants were asked to work through the *Exercise 4.1* on page 63 of the manual and when they were done, Eunice gave the correct answers.

Eunice went on to explain 'redundancy' including noun phrases (nominalisation) instead of verbs, use of wrong verbs, phrases that state the obvious, and phrases that do not add to a readers understanding (meaningless phrases). She worked through the examples on pages 68-70 of the manual.

Thereafter, Rebecca went on to explain simple sentence structure, using the examples on page 65 of the manual, and asking participants to identify subjects, objects, verbs and clauses. Participants also identified linking words in the example sentences, and generated a list of other linking words, including: ‘and’; ‘though’; ‘although’; ‘as well as’; ‘despite’; ‘which’; ‘however’; and ‘therefore’. Rebecca then went on to explain the common grammatical error of ‘passive voice’ (as covered on page 66 of the manual). In plenary, participants were then given examples of passive voice sentences and asked to correct them. Rebecca then gave some rare examples where writers may use passive voice (see examples on page 66 of the manual).

Rebecca then spoke about the problem of long sentences that confuse the reader. Using *Example 4.2* on page 67 of the manual, she asked participants to apply the grammar rules they had just learnt to fix the sentence. Participants also identified definite and indefinite words, and where possible corrected these. She also discussed the use of bullet lists to break up long sentences into digestible pieces, but cautioned participants that many journals do not like to use bullet lists, and therefore they should check the journal style before using them.

14. Evaluation

Rebecca circulated the EQUINET workshop evaluation form and the participants filled in the form (nine evaluation forms were completed). All participants indicated that the workshop was relevant to their work, while most (eight of nine) participants said the course was very useful and one said the course was useful. Five participants said the trainers and materials were both very good, and four said that the trainers and materials were good. The number of participants who understood each session are shown in the *Table 1*:

Table 1: Number of participants who understood each workshop session

Session	Number of participants who understood		
	All of it	Most of it	Not at all
What is scientific writing?	4	5	
What is peer review?	7	2	
Structure of a scientific paper	6	3	
Why is planning important?	7	2	
Developing key messages	2	7	
Ranking and scoring ideas	2	5	2
Writing the methodology	2	7	
Writing the findings	4	5	
Writing the discussion	5	4	
The conclusion	6	3	
Abstracts and summaries	5	4	
Referencing	2	7	
Computer skills	4	5	
Grammar	4	5	

It is apparent that most participants understood the session on peer review, the structure of a scientific paper, the importance of planning, how to write the discussion and how to write the conclusion. Most participants only partly understood what scientific writing is, how to develop a key message, ranking and scoring of ideas, how to write the methodology and findings and how to do referencing. Two participants did not understand ranking and scoring ideas at all.

Regarding the usefulness and or relevance of each session, the number of participants who found them useful are reflected in *Table 2*. Most of the sessions were rated as useful and

relevant by most of the participants. However, one participant did not think ranking and scoring ideas was at all useful or relevant, and two participants did not find the computer skills section useful and relevant (with one saying it was only somewhat useful). Three participants thought that the grammar session was somewhat useful.

Table 2: Number of participants who found each workshop session useful/relevant

Session	Number of participants who thought the sessions were:		
	Relevant and useful	Somewhat useful	Not useful or relevant
What is scientific writing?	9		
What is peer review?	8	1	
Structure of a scientific paper	8	1	
Why is planning important?	8	1	
Developing key messages	8	1	
Ranking and scoring ideas	7	1	1
Writing the methodology	8	1	
Writing the findings	8	1	
Writing the discussion	8	1	
The conclusion	8	1	
Abstracts and summaries	7	2	
Referencing	8	1	
Computer skills	6	1	2
Grammar	6	3	

Different types of activities, using different materials, were completed in the workshop; the number of participants who rated each activity/ materials type as clear or useful is shown in *Table 3*:

Table 3: Clarity and usefulness of activities and materials

Session	Clear and useful	Partly clear and useful	Not at all useful/ clear
Group work	5	4	
Work in pairs	7	2	
Individual work	3	6	
Mentoring	4	5	
Manual	7	2	
Other handouts	2	7	

Regarding what changes participants said they would make to improve the course, several (5) participants indicated that they would have preferred the course to be longer (ranging from five days to two weeks) so that first drafts could be completed during the course and so that more time could be given to individual sessions (particularly individual writing). However one participant also indicated that they thought the course should be delivered in less time (2 ½ - 3 days). Two participants also indicated that there should be more facilitators – one specifically indicated that facilitators from more than one journal should facilitate the workshop, as this type of facilitation was most useful. One participant suggested that before the workshop we should circulate a questionnaire to establish if some sessions were necessary or not, and then tailor the course to the responses from participants. Another participant felt that the manual could be more interactive with lots of illustrations.

Regarding recommended changes to individual sessions, several participants (five) said that more time should be given to individual sessions, especially those that involved individual writing. One participant felt that the course covered too many basics, and two participants suggested removing the computer skills and grammar modules from the course. Another participant indicated that in establishing the link between research and writing, and between

the research question and the key message, we should have a session on 'What was the research question?' Another participant suggested that a session on terminology and jargon around writing should be included. With regards to referencing, one participant felt that we should provide referencing software and computer skills as to how to use it.

On a scale of 1-5 (with 1=very confident; 2=confident; 3=not very sure; 4=unsure; 5=not likely) four participants said they felt 'very confident' and five that they were 'confident' that they would publish their paper in a peer review journal in the next six months. Participants gave different reasons for their level of confidence, as per the comments in *Box 2*:

Box 2: Reasons for confidence levels among participants

Those who were 'very confident' said:

- Skills learnt have enhanced my ability to write better papers.
- I am able to produce a publishable journal article as a result of the course.
- I already carried out research and I have the knowledge to organise the paper and fine tune the language and sentences.

Those 'confident' said:

- While I have a good idea of what I have to do to think up a good paper, I am not sure the editor and peer reviewers will be convinced of the 'scienceness' of my research.
- The skills acquired should help me to have the paper published. I learnt things I didn't actually know about. It was a great skills workshop.
- I still have a lot of work to do on my work.
- The training has helped me to be clear on the key message and the format of the paper.
- I should have used 'very confident' but I cannot be 100% perfect. I need more time to study the writing skills manual.

Other comments received from participants suggested that EQUINET should build an ongoing relationship with *African Health Sciences* to produce annual special issues, or in otherwise negotiate with journal publishers to secure publication with the network. One participant also suggested that ongoing tracking of participants to establish what they have published after the workshop (outside of the writing work they are undertaking within EQUINET). Two participants suggested that their ability to produce publishable quality scientific papers would be greatly enhanced if they could secure better access to published literature; access to information is a financial burden and hindrance to good quality research. Other participants made positive remarks about the course and thanked facilitators for the skills and knowledge acquired, or commented on the venue arrangements.

15. The way forward

Rebecca explained that in order to bring out the special issue of *AHS* by the time of the EQUINET Conference in 2009, participants needed to meet the following deadlines:

- | | |
|------------------|--|
| 28 February 2009 | Submit papers to TARSC (Rebecca) for review |
| 15 March 2009 | Rebecca to return reviewed papers to authors |
| 30 March 2009 | Participants to return corrected papers to TARSC (Rebecca) |

31 March 2009	Rebecca to submit papers to EQUINET and UHEN for approval
1 April 2009	Papers submitted to <i>AHS</i> and sent for peer review
31 May 2009	Papers back to authors with peer review comments (cc: TARSC - Rebecca)
15 June 2009	Authors to submit revised papers to <i>AJHS</i>
15 July 2009	Proofs sent to authors (to be checked in 48 hours)
17 July 2009	Author approval sent to <i>AHS</i>
August 2009	Printing

16. Closing

Rosette thanked everyone for attending the workshop on behalf of UHEN and EQUINET, and said she was looking forward to working with all the participants in the future, as part of HEPS, UHEN and as part of EQUINET. She was glad to know that the process forward would give all the participants the opportunity to be published in *African Health Sciences*, and said this would indeed be a promising start to the work of networking on health equity in Uganda, and also to highlight health issues in Uganda. She indicated that capacity building was an important part of networking in Uganda, and that the workshop, in building skills, was strengthening capacity to take forward the issues in written form. She thanked Rebecca Pointer and Professor Tumwine for facilitating the workshop, Mulumba Moses for undertaking the work involved in administering the workshop, and Eunice Kyomugisha for mentoring participants during the workshop. She wished everyone well and safe journey home.

Appendix 1: Programme

Time	Topic	Facilitator
Day 1 (3 Feb): An introduction to peer review and the writing process		
9.00-9.15	Opening Address	CO
9.15-9.35	Introductions	RP, JT, MM, EK
9.35-9.55	Participant introductions: Individual writing activity and plenary report back	RP
9.55-10.15	From research to writing: Group discussions, plenary	RP
10.15-10.30	What is scientific writing? Plenary discussion	JT
10.30-10.45	TEA	
10.45-11.30	What is peer review?	JT
	The pros and cons of peer review	JT
11.30-12.00	Peer review journals: Peer review instructions	JT
12.00-13.00	The structure of a scientific paper: Marketplace	RP and JT
13.00-14.00	LUNCH	
14.00-14.15	Why is planning important?: Plenary presentation	RP
14.15-15.15	Developing your key message: Pair work	RP, MM, EK, JT
15.15-15.30	TEA	
15.30-16.15	Brainstorming your paper: Individual work	RP, MM, EK, JT
16.15-17.00	Ranking and scoring your ideas: Pair work	RP, MM, EK, JT
Evening	Own work: Telling the story of your research	
Day 2 (4 Feb): Story-telling and writing the first draft		
8.30-10.30	Story telling: Group work	RP, MM, EK
10.30-10.45	TEA	
10.45-13.00	Writing the methodology: Who? What? Where? When? Why? and How?: Plenary presentation, individual work	RP, EK
13.00-14.00	LUNCH	
14.00-15.15	Writing the findings of research: Plenary/individual work	RP, MM, EK
15.15-15.30	TEA	
15.30-17.00	The findings: Creating tables, graphs, diagrams in MSEXCEL (Computer skills)	RP, MM
Evening	Own work: What do you believe your research shows? – bullet list	
Day 3 (5 Feb): Writing the first draft (cont)		
9.00-11.00	Writing the discussion: Plenary and individual work	JM
11.00-11.15	TEA	
11.15-12.15	The Conclusion: Group work and plenary report back	JM
12.15-13.15	The introduction: Pair work looking at introductions in journal articles	RP
13.15-14.15	LUNCH	
14.15-15.15	Abstracts and executive summaries: Individual exercise	RP& JM
15.15-15.30	TEA	
15.30-16.00	Authorship, copyright, etc.: Marketplace	RP
16.00-15.30	Referencing (specifically for AHSJ and for comparison EQUINET style): Competing teams	RP& JM
16.30-17.00	Introduction to computer skills	RP
Evening	Own work: Completing exercises in the computer skills section of the manual	
Day 4 (6 Feb): Revising your draft and feedback		
9.00-10.00	Grammar (drills, competing pair work, teams etc)	EK
10.00-11.00	Participants to work on papers	EK
11.00-11.15	TEA	
11.15-12.00	Grammar (drills, competing pair work, teams etc)	EK, RP
12.00-13.00	How to deal with feedback: Plenary discussion	RP
13.00-14.00	LUNCH	
14.00-14.15	Feedback on the workshop and way forward	MM, EK & RP
14.15-14.30	Closing	HEPS – Rosette

Appendix 2: Participant list

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