ACADEMIC REPORT WRITING - Format and some useful ideas

Presentation at the Interactive Session with UG and PG students held at PES University, Bangalore South Campus, Electronic City, Bangalore 560100, India, on December 21, 2015

Stephen ARO-GORDON, Ph.D.

Baze University Abuja, Nigeria

Department of Financial Mathematics

Faculty of Computing and Applied Sciences

Email: stephen.aro-gordon@bazeuniversity.edu.ng / getyouthsworking@yahoo.com

December 21, 2015 @ PES University, Bangalore, India

Coverage…

❑ General introduction – What & Why of Report Writing

❑ Types of Report

❑ Format and Structure

❑ The Writing Process – Some advice

❑ Concluding remarks

Resources…

1. *Scientific thesis writing and paper presentation.* By N. Gurumani (2010). Chennai: MJP Publishers.

2. *Course Guide: CIT802 – Technical Report Writing by* National Open University of Nigeria (2013). Victoria Island, Lagos: School of Science and Technology, National Open University of Nigeria.

3. *How to get a PHD: A handbook for students and their supervisor*. 5th edition. Philips, E. M. & D. S. Pugh (2010 Berkshire, England: Open University Press

4.   *Guide to technical report writing* by H. Prance (2004).. University of Sussex, www.sussex.ac.uk>schoolsandservices>Engineeringandinformatics>for students>Engineering and Design>study guides, retrieved 29th March 2015.

5.   *Research and writing across the disciplines* by Ramadass, P. & A. W. Aruni (2014). Chennai: MJP Publishers.

6.   *The challenge of establishing world-class universities* by J. Salmi (2009). World Bank Publications

December 21, 2015 @ PES University, Bangalore, India

Resources - continuation

1. *The Economist* (2015, March/April). The world is going to university, pp. 11-12.

2. *Earn what you're really worth* by Brian Tracy (2012). New York: Vanguard Press.

3. *Effective communication for science and technology* by J. Van Emden, (2001). Basingstoke, UK: Palgrave Macmillan.

4. *Research Methods: Tips and technologies* by G. Vijayalakshmi, & C. Sivapragasam (2008). Chennai: MJP Publishers.

5. 'Writing' by Wikipedia, www.en.wikipedia.org/wiki/writing...

6. Writing Reports by University of Leicester, www2.le.ac.uk>Home>offices>succeed in your studies>fund a resource>Academic writing>writing resources, retrieved 29th March 2015.

First, Let's review some keywords

- **_Academic_** – relates to education, scholarly, intellectual, theoretical

- **_Research_** - <u>methodical</u> investigation into a subject in order to

i. Discover facts

ii. Revise theory

iii. Develop evidence-based plan of action

- **_Format_** – structure: the way in which something is <u>presented</u>, <u>organized</u> or <u>arranged</u>.

- **_Report_** – An account of an event, situation, or episode.

Report Writing…

- Broadly: '<u>Report</u>' – a spoken or written <u>description</u> of a situation or event, giving people the <u>information</u> they need.

- *<u>Descriptive</u>* – <u>specific</u> information and <u>evidence</u> are presented <u>analysed</u> and applied to a particular subject, issue, or <u>problem</u>.

❑ "A report is written for a <u>clear purpose</u> and to a <u>particular audience</u>."

- University of Leicester

December 21, 2015 @ PES University, Bangalore, India

Report-writing – Rationale…

- ✓ As students, academics, managers or professionals, we are expected to write regularly, but the nature of requisite write is seldom considered and discussed.

- ✓ Report writing is a key tool for academic/research quality assessment .

- ✓ Report writing skill is a major tool for learning and development in the work place - ability to gather and evaluate relevant information, etc.

- ✓ Today's knowledge economy is driven by first-rate innovative research.

- ✓ Good report writing skill enhances quality of teaching, good teaching builds human capital, quality human capital in turn drives modern economy.

- ✓ Many governments now reward Universities for research – and we cannot do good research without good report writing skill.

Report-writing - Continuation

❑ *Some quotable quotes from Brian Tracy (2012)*

o "The ability to talk is not the same as the ability to communicate."

o "The best communicators do not use a lot of words…"

o "Writing actually sharpens your thinking, stimulates your creativity, and enables you to focus far better than if you were just trying to work everything out in your mind."

Some important issues

i. Reporting - in what format/form?

ii. What are you reporting?

iii. To whom are you reporting?

iv. Is your information needed?

v. Is it descriptive – factual, evidence-based, diligently studied?

❑ Distinguishing prehistory from history, the latter has been defined by the advent of writing – presenting information in a permanent form.

Note other types…

Research Reports

Technical Reports

Press Reports

(Note: Press reporting is outside our present focus at this symposium)

Technical Reports…

❑ "A technical report is a *formal* report designed to convey technical *information* in a clear and easily accessible *format*."

- Prance (2004)

❖ Various consultancy reports
❖ Appraisal reports
❖ Feasibility reports
❖ EIAs
❖ Engineering reports
❖ Financial due diligence
❖ M&E reports
❖ Field survey reports
❖ Conference reports
❖ Committee/Investigative reports, etc.

December 21, 2015 @ PES University, Bangalore, India

Academic Research Reports

❑ The ultimate purpose of all research efforts is to prepare and present a written report that formally documents the research process and its results.

❑ Let's recall what research is all about:

-*"Serious study in order to discover new facts, test new facts, test new ideas or revalidate existing general knowledge about a concept, issue, situation, or phenomenon."*

- *"…a systematic search for more information and knowledge." - Vijayalakshmi & Sivapragasam (2008)*

- *"Fact-finding is research." – Ramadass & Aruni (2014)*

- *"Research is a piece of work done to find out an answer to a question either hypothetical or real." - Ramadass & Aruni (2014)*

December 21, 2015 @ PES University, Bangalore, India

Audience please!

❑ **"Clear purpose" -** Report-writing is about exchange of information – hence, the premium value attached to the needs of the AUDIENCE - recipient of the result of your writing.

❑ **Typical audience** - CEOs, managers, analysts, investors, bankers, policy-makers, scholars, examiners, experts, reviewers, editors, clients, project team members, students, etc…

❑ *When we write for any purpose, let's carefully consider the user's need,* assumptions, instructions, and guidelines – e.g. guidelines for authors specified by Journal editors, conferences and scientific meetings.

Format/structure – General principles

❑Ensure that what you have presented is easy to locate and follow.

❑Your report should have noticeable 'flow' from introduction to the end.

❑In essence, academic report (indeed any report) should be presented in a clearly structured format – title, sections, headings, headings, etc.

Broad structure

I. INTRODUCTION

II. BODY OF THE REPORT

III. CONCLUSION

Introductory sections

Section	Details
Title Page	○ *The title of the report* (note word length/count specifications). Be brief and explicit. Note name, date, and user, declaration, certification, where applicable.
Summary	○ <u>*Abstract*</u>*/Summary/Synopsis* – Provide a brief summary/overview of the report, pivotal features, purpose, scope, findings, and conclusions (Again, observe / follow word count specifications)
Content	○ Number and list all sections/subsections/headings with the traceable <u>page</u> numbers. *Numbering* should be clear and consistent throughout.
Introduction	○ Provide some brief background information, introduces the main issue (ToR), background information, purpose, and significance of the report, and leads straight into the main text.

December 21, 2015 @ PES University, Bangalore, India

A word about titles / topics

BAZE
UNIVERSITY
ABUJA

❑Titles are labels, not sentences – let's keep them simple and catchy!

❑ As a general rule, titles should not contain acronyms and jargons.

❑ To begin with, is the topic motivating enough (compelling) to you personally.

❑ How unique is it? Is the research topic an idea or area that many / other researchers have already worked on – Your topic should be original so that it would not amount to unnecessary duplication.

❑ How <u>researchable</u> is it? Is the study population reachable / accessible? Or are you 'researching' something rather 'controversial' or 'political' in nature? Do you have some moderate amount of data and academic literature on the subject-matter to warrant your own <u>scientific</u> contribution?

❑ What related issues have been raised in newspapers, journals, etc.?

❑ Have you discussed your thoughts with your instructor? What are his / her views?

❑ Be flexible enough to change / modify your 'accepted' topic if need be, possibly due to some sudden discoveries, developments or outright scarcity of data.

❑ Try to keep academic research topic simple – your 'little' contribution to the world of knowledge is just good enough; if you uncover some great things, that's great too!!

Writing your Abstract – An aide-memoire

B	Background information.
P	Purpose – The research's principal activity.
M	Methodology – How the work was done.
F	Findings – The key results of the study.
C	Conclusions – relevance to the study's theme.

Source: Ramadass & Aruni (2014)

December 21, 2015 @ PES University, Bangalore, India

The main body of the report…

Section	Details
Literature Review	o Status of general knowledge on the issue; include key applicable concepts/theoretical framework and recent empirical evidence, if any.
Methodology	o Information on the research process, i.e. how you approached the investigation/facts-gathering instruments, and analysis; justification for the adopted sampling system/case where applicable.
Results	o Presentation and relevant discussion/inference from the research results; summary of the findings and implications bearing in mind the report's overall aims and objectives

The concluding sections…

Section	Details
Conclusion	○ A brief, logical summing-up of the central ideas developed in the main body of the text. Demonstrate the overall significance of the report/research/work done – relatedness or otherwise to established knowledge / theory / principles. No new material is needed here, except, perhaps few aspects that require further studies.
References	○ List details of published sources of material used in the text, including websites used. In some cases, you may include a bibliography – other sources of materials not used but considered useful for further reading.
Endnotes	○ Where applicable, list people who assisted you in the research or preparation of the report
Appendices	○ Any additional material that is essential for full comprehension of the text, but not needed by a casual reader.

Some presentation issues…

o   Script font and paper - e.g. 12pt, Times New Roman or Arial?)

o   Margins – Subject to the recipient's specific requirements, the general rule for typed reports in A4 paper are: 3.81cm (1.5 inches) on the left and 2.5cm (1 inch) on all the other sides (Gurumani, 2010).

o   Spacing: single- or double-spaced? Typing in double space is generally advised.

o   Pagination.

o   Binding.

❑ *Note*: Follow all the relevant editorial guidelines carefully.

Read widely…

- o _First thing first!_ Embrace an active reading culture (= research reading/scanning)

- o Extensive research reading (reading articles / papers published in reputed peer-reviewed international Journals) will help you to become familiar with good writing skills and expressions because you will be able gain valuable insights into the work done by other authors/writers/research workers in the field.

- o Perhaps most importantly, with extensive reading culture, you will be more "current" and better positioned to identify the _**gaps in knowledge**_ and enrich your own contribution.

December 21, 2015 @ PES University, Bangalore, India

The writing process – Further advice

o ***Plan / plan / plan!*** "Begin with the end in mind"
– Stephen Covey

o ***Information-gathering:*** Keeping accurate records of published references that you want to use in your report.

o ***Flexibility/creativity*** – Be open to fresh ideas as they emerge – let the emerging ideas flow!

o ***Structuring the report*** – Work with a template to start with and follow the outline in terms of headings and subheadings.

o ***Producing the first draft*** – A useful result-oriented flow could be:

Main Text ⟹ Conclusion ⟹ Introduction ⟹ Summary!

▪ (**_NOTE:_** Process-wise, you can do your styling/formatting / graphics later)

Revising the first draft…

o *Brevity* (economy of words), double-checking for coherence, technicalities, logicalities, grammar, spelling, etc., are key to quality academic report writing.

o *Maintain known standards* -Watch your vocabulary, grammar, and semantics.

o Revise your first draft at least four times before finalizing it.

Use of TABLES and FIGURES…

- *Diagrams, (pictures!), graphs, tables, maths* – keep them simple and relevant within main text, otherwise, they should go into an appendix.

- **Question: Should we use both a Table and a Graph in the same paper?**

- **Answer: As a general rule, presentation of data both in a Table and in a Diagram is not encouraged – never allowed in a journal (Gurumani, 2010).**

- We can use a Figure (graph / chart) where we need to highlight a trend or do a comparative analysis.

o Try to ensure that your Table is placed as immediately as possible next to its first introduction in the text.

o A paragraph should not be broken for the sake of placing a Table.

o Every Table should have a caption/precise title placed above the Table.

o All the Tables in a document should be serially numbered (Arabic or Roman) for easy identification. Again, maintaining consistency in the numbering system is vital.

o Ensure that the rows/cells in the Table are logical and fully labelled – let's not confuse the reader or assume that the reader knows our intention!

Honesty:
It is still the best policy

o *Originality versus plagiarism* – Copying someone else's words, facts or ideas without reference, passing them off as our own is a serious offence.

o Be very careful with the use of *'cut and paste'*.

o *Intellectual honesty* is very key – your report should be honest and reliable, not only in terms of the data-collection process and but also in terms of <u>factual</u> data-presentation.

Few more thoughts

- o Communication through writing is about ***effectiveness*** – too many changes in style wont help your reader.

- o Information is about ***quality*** – attractive, well-structured and packaged report is key.

- o ***Brevity*** – watch information overload. Your time and that of the reader are no less important factors for impactful reports.

- o ***Proofreading versus Word processing*** – Have the habit of giving your work to other people to read before submitting the piece of work. Don't be fooled - computer outputs will not make up for poor content and sloppy work!

- o ***Collaborative research*** – This has a huge quality assurance advantage.

Still on Clarity & Brevity…

✓ <u>Clarity</u> is very key to scientific writing and there is no room or need for ornamentation in scientific writing!

   -(Ramadass & Aruni, 2014)

✓ <u>No ego trip</u> – Personal pronouns such as I, we, you, me, my, ours or us, should not, <u>as a general rule</u>, appear. Focus on the issue and evidence-based solutions.

✓Choose <u>one style</u> and be <u>consistent</u> with it throughout your report.

Which reference citation style?

- ✓ APA (American Psychological Association) style?
- ✓ Harvard style?
- ✓ CBE (Council of Biology Editors) style? Etc.
- ❑ Ensure compliance with the editor's/publisher's guidelines or specifications and be consistent throughout the report.
- ❑ Check (and double check!) to ensure the inclusion of all the references cited in the text into the section listing the References.

December 21, 2015 @ PES University, Bangalore, India

Feedback as a learning tool…

o *Peer-review responses* – Smile! Use the feedbacks (critiques, positives or rejects) from reviewers to improve your writing skills.

✓ Respond humbly to "harsh" commentaries if you have to, but don't react!

**BAZE
UNIVERSITY
ABUJA**

o *"It is a badge of honour to accept valid criticism."*

- Proverbs 25: 12

How would you describe a good report?

i.   *Attractive* – great, precise title, neatly typed, good paper, relevant diagrams and graphs.

ii. *Balanced language* – simple, basic, technical (but not too technical!) and befitting the subject/issue addressed.

iii. *Brief* – to the point, no redundant sentence, no repetition of facts. The best sentence to express an idea is not necessarily the longest one.

iv. *Accurate* **–** Valid, reliable, scientific, factual, evidence-based, not imaginary or sentimental.

v.   *Practical* – Recommendations/implications/suggestions are relevant to the subject and implementable.

vi. *Wholesome* – Release useful hints, caveats, regarding difficulties or shortcomings encountered to assist future investigators.

December 21, 2015 @ PES University, Bangalore, India

1. Research **G-**ap
2. **O-**bjectives
3. **M-**ethodology
4. **R-**esults / Findings
5. **I-**mplications – Business / Economics / Policy
6. **S-**cope / suggestions for further research

Concluding remarks

❑ Ability to organize your thoughts and the results of your investigations and to write clear, precise, and well-structured reports, is a crucial skill for academic and professional success. To this end, this presentation tried to share some practical ideas for writing excellent scientific reports.

❑ The need to identify and to carefully note and comply with editorial requirements of the research agency or academic institution to which a report would be submitted, was again stressed.

❑ A research will not be deemed complete until its outcome has been communicated to the stakeholders, co-researchers, scholars, funding agencies, practitioners and policy makers, etc. It is therefore imperative for the researcher to communicate effectively, inform qualitatively, and, above all, concisely.

Stephen ARO-GORDON, Ph.D.

Baze University Abuja, Nigeria
Department of Financial Mathematics
Faculty of Computing & Applied Sciences
Email: *stephen.aro-gordon@bazeuniversity.edu.ng* /
getyouthsworking@yahoo.com

BAZE
UNIVERSITY
ABUJA

December 21, 2015 @ PES University, Bangalore, India

Caveat / feedback …

- All the materials used in this presentation are solely for educational purpose, advancement of knowledge and improvement of educational practices to move the society forward. The author will be pleased to make good any omissions or rectify any mistakes brought to his attention at the earliest possible opportunity.