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Science | Technology | Medicine

Developing and publishing research manuscripts in reputable scientific journals



by

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Presented at

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Thomas Adewumi University, Oko, Kwara State.**

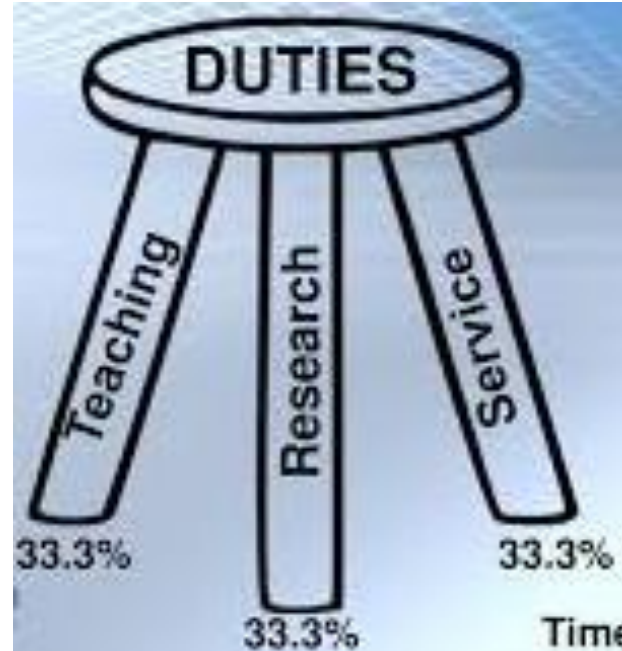
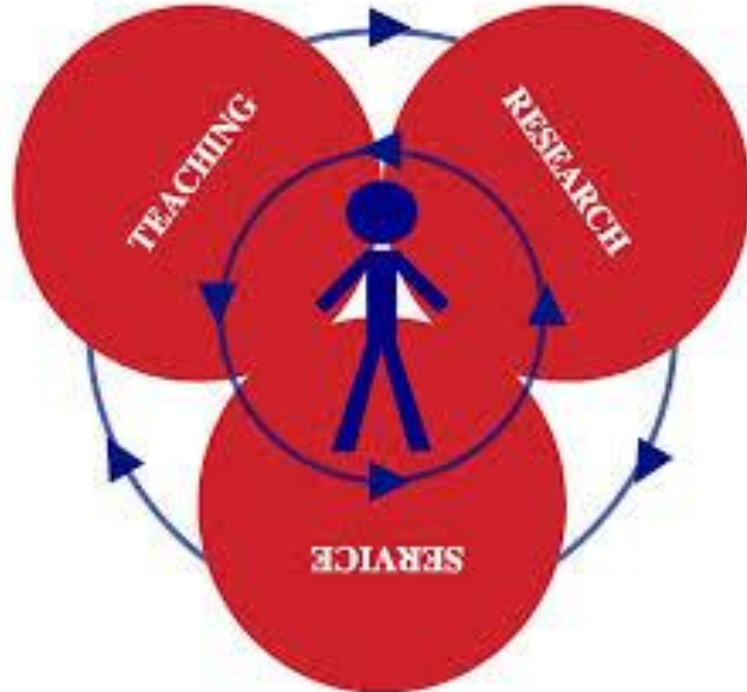
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Outline of presentation

- Introduction
- Developing high quality scientific manuscripts
- Publishing manuscripts in reputable journals

Introduction

- The major roles of academic staff or faculty member?



- Research is central to the roles.

Research communication

- Interpreting or translating research findings into language, format and context that experts and non-experts can understand and utilize.
- Research is incomplete until appropriately and effectively communicated.
- Research findings can be communicated in the forms and manners:
 - Scientific conference presentations
 - Thesis and dissertations
 - Workshops
 - Conference proceedings
 - **Journal articles**

Journal article

- **Definition:** It is a processed and an original, **peer-reviewed** report of research findings that appears in scholarly journals.
- **Peer-reviewed:** Other experts in the field review the article to ensure that it is scientifically sound before publishing.
- **Types of journal articles:** There are two types of journal articles
 - **Original research articles:** Original report of studies that were actually carried out by the researcher.
 - **Review articles:** Summary of findings from existing research on a specific topic, providing suggestions/directions for future research.

Journal article are the currency of the academic profession!!!

- Indicate presence/existence of a researcher in a field of research globally
- Evaluation of academic staff for purposes of;
 - Recruitment and promotion
 - Securing local and international collaborations
 - Securing grants and fellowships
 - Justify grants and fellowships
 - Requirement for qualification (Ph.D.)

An academic staff must learn the science and art of writing and publishing scientific manuscript.

Publish or perish!!!

Developing scientific manuscripts

- It is an intensive and technical, but rewarding endeavour.
- My objective;
 - Provide step by step guide in writing a high quality manuscript
 - Highlight some ethical issues
 - Provide some tips to increase the chance of successful publication

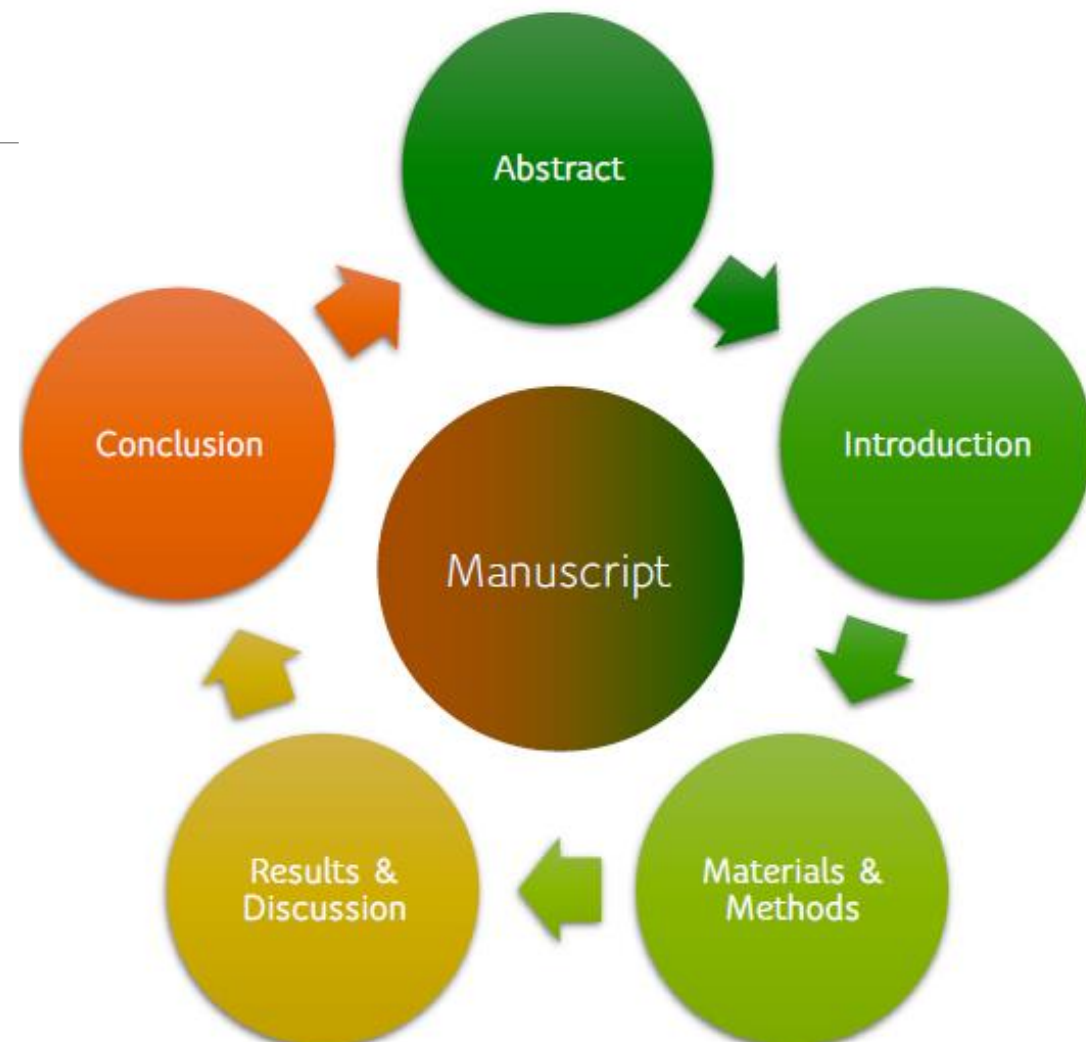
Many received formal training, while most are informally trained by understudying more experienced colleagues.

Major sections of a scientific manuscript

Most scientific manuscripts are written following the **IMRAD** format, i.e.

- **I**ntroduction,
- **M**aterials and methods
- **R**esults
- **D**iscussion and conclusion

Added to these are the title, abstract and references



Before you write...

- Read a good number of articles on the subject and at the level you aspire to publish.
- Collect and use relevant articles at the level you intend to publish.
- Ensure your data were generated from excellently planned and executed study.
- Identify target journal(s)



Title and title page

- **Title** - Most visible part of the article
 - Contain keywords to reflect findings in the manuscript
 - Adhere to limits of words or character (less than 20 words)
 - Concise and clear
- **Authors** - Substantial contributor to the following:
 - Conception and design
 - Data collection, analysis and interpretation
 - Approval of final draft

Other contributor can be acknowledged.

Abstract

Brief description of introduction, methods, results and conclusion

- Informative, fascinating, concise, complete and independent
- Adhere to limits of words or character
- Another most visible part of the article



Introduction

This section should usually be made up of **three** paragraphs.

- **Paragraph 1-** What is known
 - Definitions, descriptions and importance
 - Essential information needed to understand background
- **Paragraph 2 –** What is not known
 - Knowledge gap(s)
 - Problems
 - Understanding of why the research is performed.
- **Paragraph 3-**
 - Aim and objectives
 - What will be added to knowledge
 - Novelty of the research



Materials and methods

- List important materials and sources
- Describe in details what you did and how.
- Describe selection criteria for study population and samples
- Describe experiments and analyses carried out
- Details provided must make it possible to replicate the method by other researchers.

Results

- Dedicate a paragraph to each table or figure
- Highlight only the interesting and important data
- Do not interpret data
- Must correlate with methods

- Tables and figures
 - Clearly presented
 - Presented sequentially as cited in text
 - Self-explanatory captions
 - Consistent in number of decimal places
 - Adhere to limits

Discussion and conclusion

- Recap main findings
- Interpret findings (Do not repeat results)
- Compare your findings with previous findings
- Provide the implications of your findings (Contribution to knowledge or advancement of knowledge)
- Outline strengths and limitations of research design and methods.

References

- Journals have different referencing styles. E.g. APA style, Vancouver style.
- List all references cited.
- Learn and use referencing software, such as Zotero, EndNote and Mendeley
 - Facilitate citation
 - Facilitate complete reference list
 - Facilitate adaptation/reformatting of reference styles



Additional tips for writing scientific manuscript

- Compact, simple and clear write up
- Avoid excessive use of adjectives and adverbs
- Do not start sentences with numbers.
- Numerals from 1- 10 are written in words
- All abbreviations are written in full at first mention
- Avoid plagiarism (similarity score above 20%)
- Cite recent references from reputable journals (50% less than 5 years old)
- Minimize self-citation



Publishing scientific manuscripts in reputable journals



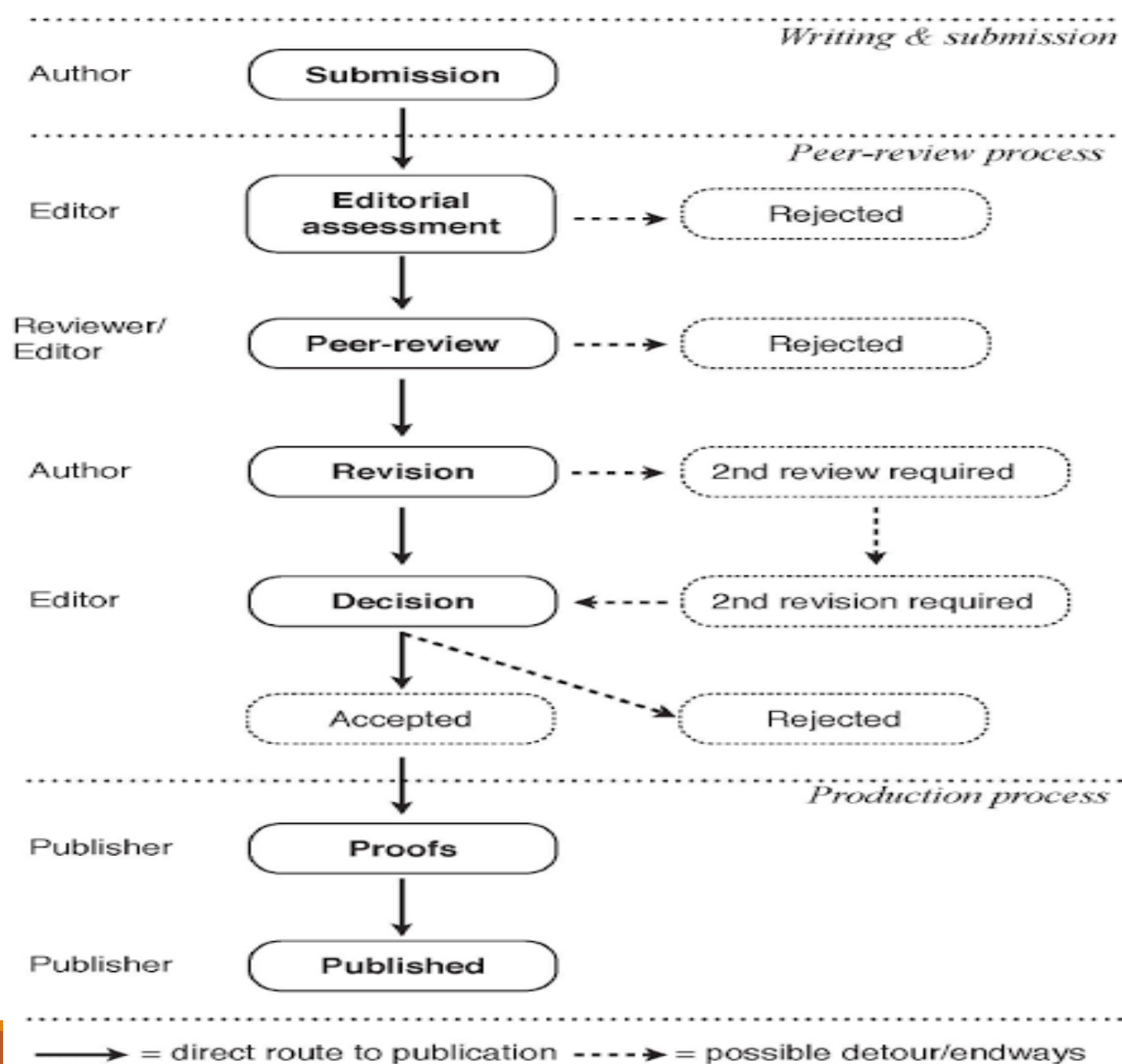
How do I know a reputable journals?

- The journal should be **indexed** in the major bibliographic databases for visibility
- The journal should have a reasonable and consistent **history** of publication.
- The **publishers** should be trustworthy.
- The articles must be rigorously **peer reviewed**.
- The editorial board members must be established researchers.

e.g.

- ❖ Thomson Reuter Web of Science indexed journals
- ❖ SCOPUS indexed journals
- ❖ Journals published by professional bodies or academic societies.
- ❖ University-based journals.

Aim high but be realistic



Tips for publishing in reputable journals

- Adhere fully to “Guidelines for Authors”.
- Prepare and submit a cover letter
- Address all reviewers’ comments.
- Respectfully respond to reviewers’ comments
- Handle rejections with grace and optimism



Other considerations in the choice of candidate journals

- Scope
- Frequency of publication
- Open access or subscription based
- Publication fee
- Waiver policy
- Impact factor.



Reasons for rejection of scientific manuscript

- Poor adherence to “Guidelines for Authors”
- Plagiarism
- Not within scope of the journal
- Lack of novelty
- Poor study design, methods and instrumentation
- Poor use of language
- Greater proportion of old references



Conclusion



Sharing your knowledge to the benefit of others and contributing to the body of knowledge on a specific topic is most fulfilling.

So, get out your pen and start writing.



Acknowledgements

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***Thank you for your
kind attention!!!***