

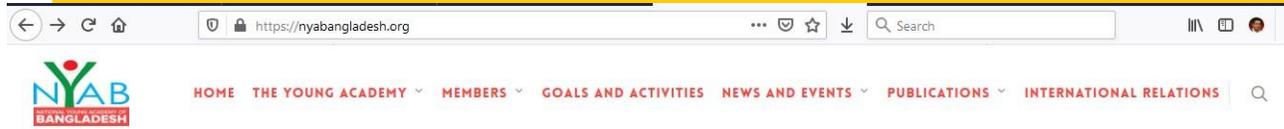
Publishing in Peer-Reviewed Journal Procedure and Ethics

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National Young Academy of Bangladesh (NYAB)



- Fourth young academy established in South Asia.
- **Purpose of NYAB**
 - To connect early career researchers of Bangladesh at home and abroad
 - To promote science education and awareness
 - To empower young scientists to work together for the betterment of Bangladesh

Some Definitions

Research:

systematic investigation to establish facts (new information) to reach new conclusions (new understanding)

Research article:

reports the results of original research

Peer-reviewed journal:

publish articles reviewed by several experts

'Science can only move forward through a transparent and open exchange of ideas backed by experimental evidence' Royal Society

Paper Types

- Original articles/Full length articles
- Letters/Rapid Communications/ Short communications
- Review papers

Journal Selection

- What is the main focus of your research (Aims and scope)?
- Who will be interested (target audience)?
- How significant are your findings?
- Where have similar articles been published?
- Are impact factor and other indicators impressive?
- How is the reputation of the journal?
- Is it open access (think cost !)?

Benchmarks of a Strong Manuscript

- reports a clear, useful and exciting message
- present and organize text, figures, data tables etc. in a logical manner
- tells a story in such a way that editors, reviewers and readers can extract the significance easily

A good story for the readers !!

Manuscript Structure

- Title
- Abstract
- Introduction
- Methods
- Results and discussion
- Conclusion
- Acknowledgements
- References
- Supplementary materials

Title

- Convey the main topic of the manuscript
- Introduce your manuscript to an editor
- Be specific and concise
- Avoid jargon and abbreviations

Long title distracts readers

Specific and concise title attract readers

Title: Example

Breakdown of predictability in gravitational collapse

SW Hawking

Physical Review D 14 (10), 2460

Zeta function regularization of path integrals in curved spacetime

SW Hawking

Communications in Mathematical Physics 55 (2), 133-148

A topological Dirac insulator in a quantum spin Hall phase

D Hsieh, D Qian, L Wray, YQ Xia, YS Hor, RJ Cava, MZ Hasan

Nature 452 (7190), 970

Papers with shorter titles get more citations
R. Soc. Open sci. 2 (2015)

Abstract

- Influence whether or not your research will be considered for peer-review
- A significant number of the readers read only abstract (Think why they should care your research) !!
- Precisely state the objective and scope of the investigation
- Very briefly describe the methods employed
- Summarize the results and state principal conclusion

*Abstract is an accurate summary of your findings
and must be able to stand alone*

Introduction

(An introduction sets up the question or issue to be resolved or studied)

Beginning → **Middle** → **End**

- What problem was studied?
- Why did you address this problem? How and why this research is important?
- Provide background information to put your research into context
- Relate the problem to a theory
- Clearly state the aims of your study .
- Tell the methods you used to carry out your aims.

Convince readers that you clearly know why your research is useful

Methods

- Use clear subheadings
- New methods must be explained in sufficient details
- Established methods can be referenced
- Describe statistical tests used
- Follow sequence

State the methods in a way so that a capable researcher can reproduce the experiment

Keep detailed laboratory notebooks

Results

- Assemble your findings in a logical order to make a clear and easy-to-understand 'story'
- Include:
 - Main findings
 - Unexpected findings if any
 - Results of statistical analyses
- Use subheadings (regular article).

Present the facts

Results: Graphs, Figures, Tables

- Captions must be detailed enough to make figures and tables self-explanatory
- Legends must be able to stand alone but not too large
- Avoid duplication with the text
- Use color only when necessary. Use it in a manner that different series can be distinguished if printed in black and white.

Use figures & tables as an effective way of expressing your findings

Discussion

- Interpret the results
- Present the major or main finding first
- Compare your results with those from previous studies
- State the significance of your results
- Mention possible speculations and applications
- Reasonably describe limitations
 - If you don't, the reviewers will !
- Suggest future work

Conclusion

- Present your conclusions based on results (limit statements to what your data proves, evidence based)
- Point out implications
- Mention practical applications (if any)
- Recognize the importance of “negative” or “unexpected” results
- Give recommendations for further research

Acknowledgements

- Acknowledge individuals who have assisted with your study, including :
 - Financial Supporters
 - Colleagues/Collaborators
 - Suppliers who may have given materials

References

Why citing is important (source: MIT libraries)

- To show your reader you've done proper research by listing sources you used to get your information
- To be a responsible scholar by giving credit to other researchers and acknowledging their ideas
- To avoid plagiarism by quoting words and ideas used by other authors

Inserting References

- Cite the main scientific publications on which your work is based
- Conform strictly to the style given in the 'Guide for Authors'
- Make sure references are correct and consistent (authors responsibility)

“Writing” order

Methods/Sample
preparation/Experimental technique

During the research

Results

Introduction

Discussion

After selecting target
journal

Title

Conclusion

At the end

Abstract

*A sample paper published in a peer-
reviewed regular journal*

Publication Ethics

Why do ethical standards for publication exist?

- To secure public trust in scientific findings
- To foster an efficient and sustainable publishing system
- To ensure that people receive credit for their work and ideas

Scientific publication depends, to a greater extent, on trust

International Guidelines on publication ethics

- Committee for Publication Ethics (COPE)
(<https://publicationethics.org/>)
- Singapore Statement on Research Integrity
(<https://wcrif.org/guidance/singapore-statement>)

Singapore Statement on Research Integrity

Preamble. The value and benefits of research are vitally dependent on the integrity of research. While there can be and are national and disciplinary differences in the way research is organized and conducted, there are also principles and professional responsibilities that are fundamental to the integrity of research wherever it is undertaken.

PRINCIPLES

Honesty in all aspects of research

Accountability in the conduct of research

Professional courtesy and fairness in working with others

Good stewardship of research on behalf of others

Ethical Issues

- Submission frauds
- Excessive self-citation without context
- Data manipulation
- Improper author contribution
- Plagiarism
- Unrevealed conflicts of interest

Submission Frauds

DON'T DO:

- **Simultaneous submission** of the same manuscript to multiple journals
- **Duplicate publication** based on the same dataset with identical findings by changing title or author order
- **Redundant publication** by dividing one research project into many little papers (“salami slicing”)

DO:

- Emphasize on publishing a complete article with all relevant results
- High citations or h-index is much more valued than huge number of low-quality papers
- Citations are a key currency in the academic world

Data Manipulation

Data fabrication and falsification are extremely serious form of research misconduct.

- **Fabrication**- Draw conclusions from data that are not generated by the study
- **Falsification**- Willful distortion of data
 - Keeping anomalous or unexpected results hidden
 - Manipulation of materials, equipment or process to support a hypothesis or claim
 - Modifying images substantially to conceal truth

Ethics with Authorship

Who is an Author?

The following criteria should be met to credit authorship-

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work
- Drafting the work or revising it critically for important intellectual content

The extent of involvement decides the order of authors

Non-Author Contributors

Contributors who do not meet all authorship criteria should not be listed as authors, but they should be acknowledged with their permission.

- Acquisition of funding
- General administrative support
- General supervision of a research group
- Technical editing
- Language editing
- Proof reading

Best Practices for Authorship

- First authorship is provided to the person who articulates the manuscript
- Corresponding author may be the principal investigator of project or the 1st author depending on who will be able to defend the work and respond to queries regarding it in the short and long-run

Misconducts with Authorship

Ghost authors - who meet authorship criteria but are not given authorship or acknowledgement (injustice)

Guest authors - who do not have significant contribution but are listed as co-author because of their seniority, reputation or supposed influence on acceptance of the manuscript

Gift authors - who do not fulfill authorship criteria but are listed simply due to an affiliation to an institute where the research was conducted

Plagiarism

- Scientific words and ideas are author's intellectual property.
- **Plagiarism** takes place when you copy others' words or ideas and do not acknowledge properly.
- **Self-plagiarism** occurs when you use the same text in multiple papers without citation of the prior work.

Both types of plagiarism are considered to be unacceptable practice by scientific publications

Consequence of Plagiarism

Journals often use plagiarism-checking software e.g. **Turnitin, iThenticate** that assists editors in identifying plagiarists.

- Direct rejection of the manuscript without peer-review
- Not allowing submission for 3-5 years and informing the co-authors and editors of related journals.
- Prohibition for acting as an editor or reviewer
- For less serious cases, placing the author on a “watch list” for careful examination of their next submissions prior to requesting review

Even unintentional plagiarism results in painful consequences

How to Avoid Plagiarism

- Cite the original sources of idea and information
- Avoid excessive use of other words or botched paraphrasing
- If you use the language of your source, you must quote it exactly, enclose it in quotation marks, and cite the source.
- Get written permission before reproducing figures and tables.

- MIT Writing and Communication Center
<https://cmsw.mit.edu/writing-and-communication-center/avoiding-plagiarism/>

*No end point, no conclusion of this
discussion, always open*

Thank You Very Much