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### SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE, VIJAYAPURA

A Report on Workshop

"Art of Research Writing"
Organized by
R & D Cell, BLDE (DU)

Date: 16/6/2023 Venue: Dept. of Medical Education.

Participants: Academicians, Faculty, Research Scholars, PG Students from all disciplines.

Resource Person: Dr. Ganasoundari, Robohot Academic Services, Bangaluru.







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The workshop started with the welcoming and introducing to the speaker and the team by Dr. Nirmala G, Co-Ordinator, (R & A), BLDE (DU). Dr.M.M.Patil, Director, R & D Cell, BLDE (DU) addressed few words about the important of art of writing in research. He also briefed about there is consistent demand on academicians to produce good quality research papers. With the help of some characteristic examples and activities, the workshop will serve as a practical guide to the art of writing papers.



## **Objectives of the workshop:**

- Identify reasons to research writing projects.
- Outline the steps of the research writing process.





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#### **Content covered:**

Date	Time	Modules	Topics
	10.00 AM to 1.30 PM	Research Proposal Writing	Choosing and articulating a research topic
			Developing research questions
			Writing a problem statement
			Formulating objectives
			Writing the proposal
16.06.2023			Reviewing literature
			Finding research gap
		Art of thesis writing	Hypothesis development
			Choosing the right methodology
			Reporting the findings
	1.30 PM		
	to	LUNCH BREAK	
	2.30 PM		
		I	
	2.30 PM	Research paper writing	Choosing a journal
	to		Communicating the research findings – IMRAD
	4.30 PM		Proofreading





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## I. Research Proposal Writing

Scientific writing is a form of logical communication and thinking. Good scientists are always strong writers. Strong writing skills help to develop good speaking and teaching skills. Weak writing skills are often symptomatic of inadequate experience in thinking scientifically and of the lack of knowledge. What makes a good writer? 1. Knowledge of the subject or topic. 2. Passion for the subject. 3. A logical and creative mind. 4. A desire to communicate. 5. Appreciation for who the audience is. 6. A willingness to revise and rewrite. Note that nowhere is the mastery of the English language or grammar mentioned. Good writing can be done in any language. Poor English is not an excuse for poor writing abilities. It also does not follow that native English speakers are naturally better writers. This class will be about communicating in the written language. Elements of English grammar and style are second-order issues, which can be easily learned or corrected with due diligence.

Similarly, the writer should have complete command over his/her manuscript, even if the contents of the manuscript result from collaborations with other authors. If you understand this analogy with art, then it becomes clear that, as an author, you would never copy someone else's work (plagiarism) and you would not let someone else (such as your advisor) write the paper for you and still put your name as first author.

#### Scientific writing there are four components of science:

- 1. The first is recognizing good questions or problems.
- 2. The second is answering these questions by systematic experiments and observations.
- 3. The third is interpreting the experimental results.
- 4. The fourth is communicating the results and implications to the outside world for the benefit of society. follow this basic template:
  - Set the scene and identify the mystery or problem to be solved.
  - Describe the methods used to gather data (evidence).
  - Present the data (evidence) in an unbiased way (negative, positive and neutral data must all be presented).
  - Analyze the data
  - Interpret and discuss the data
  - Conclude

Structuring a scientific paper there is only one template for writing a scientific paper. Deviating from this template can be perilous unless you are highly experienced at writing. The general template parallels that of





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the above detective story. A cardinal rule is that all elements of the paper must flow continuously and unidirectionally. In this regard, scientific papers differ fundamentally from fiction novels, essays or movie scripts, which are often littered with flashbacks, flash-forwards, and continuous suspense. Scientific writing should be direct and concise with minimal suspense, except for a little anticipatory suspense in the introduction. Above all, scientific writing needs to be clear, leaving no room for interpretation of the author's thoughts (the author's interpretations may eventually turn out to be wrong, but there should be no question about the author's ideas or views). Here are the basic structure and order of a scientific paper. Follow it religiously.

#### 1. Introduction

This is where you motivate the reader by clearly identifying the question or problem and explaining their broader significance. This is also where you provide necessary background information for the reader to appreciate the importance of the problem. Then you briefly present your analytical approach or philosophical approach to solving the problem. This section should be concluded with a brief taste ("appetizer") of what is to come in the rest of the paper to seduce the reader into reading beyond this section. This section should be written for the non-specialist. Keep jargon to a minimum.

#### 2. Methods:

This section establishes the credibility of your data and results. This is where you present the details of the analytical methods, experimental setup, or numerical setup of your study.

### 3. Results or data:

This is where the evidence and the observations are presented in an unbiased way. All the results of the experiments, whether positive or negative, must be presented without interpretation. The data should stand the test of time, so do not dirty it with your opinions, biases, interpretations, etc. This section should be clean and simple. Just provide the facts. Note that this is the section where you can discuss the quality of the data or show correlations. You can also compare your results with other published results, but again, refrain from interpretation. Keep in mind that everything you present in this section must be addressed in the Discussion or data analysis section (i.e., don't generate orphans).

#### 4. Discussion and data analysis:

In this section, you present what you think the data mean and how you arrived at your conclusions. This is where you interpret the data, discuss implications, and extrapolate. This is where you return to the objectives and questions laid out in the introduction.

- How do your data help to address the hypothesis or question you asked in the Introduction?
- How do your results and your interpretations compare to other published studies?





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Be fair and honest. Lay out the logic of your conclusions. Point out the limitations of your interpretations.

#### 5. Conclusions:

This is the final delivery. Here, you re-iterate the most important messages in your paper. You do not need to motivate the problem in this section as you must assume that the reader has already read the introduction. Similarly, it is not necessary to discuss the Methods or how one arrived at the conclusions. All one needs to do here is to summarize the most important results (data) and the most important conclusions derived from the data.

## II. Art of thesis writing:

### Asceratin the types of study:

- 1. Prospective
- 2. Retrospective

### Variables:

- 1. Baselines
- 2. Population variations
- Treatment effect size.

#### Data to be collected:

List out the variables

- 1. List out the objectives
- 2. List out the hypothesis
- 3. Create a variables plan.

#### Some additional tips for writing good scientific papers:

### • Harmony Build-up:

A good introduction advertises, motivates, and entices the reader to continue reading by giving the reader hints of what is to come. Follow-through and delivery: After building-up the expectations of a reader, you need to





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follow through and deliver with data and conclusions. Balance between promise and delivery: The build-up and follow-through must be commensurate. If your build-up is too strong and you have no delivery, your paper falls flat and nobody will ever read a paper authored by you again. If your build-up is too weak, then you've undersold your work. Above all, never try to amplify your conclusions with shameless speculations just to satisfy your promise. If your results are not as stunning as you expected, tone down your introduction.

#### • Simplicity:

Good scientific manuscripts should have only one or two main messages. Smaller messages are still important, but must be relegated to their appropriate hierarchical positions. More than two big messages will confuse the reader.

#### • Creatures of habit:

When writing your paper, think about your audience. When most people pick up a paper, the first thing they look at is the title. Is the title interesting and informative? If so, the reader will either go straight to the introduction or the abstract. Experts in the field will likely read the abstract first, but non-experts almost always go to the Introduction because they are curious what type of scientific problem is being solved. This is the turning point for your reader. If you lose him/her here, it's over. However, if you're successful at maintaining his/her interest, the reader will likely then skip right to the Conclusions to get the punch line of your story. If he/she finds the punch line interesting, then he will take the time to wade through the details of your methods, results and discussion. He will then take your abstract as a memento of your paper since it is humanly impossible for him to remember all the details.

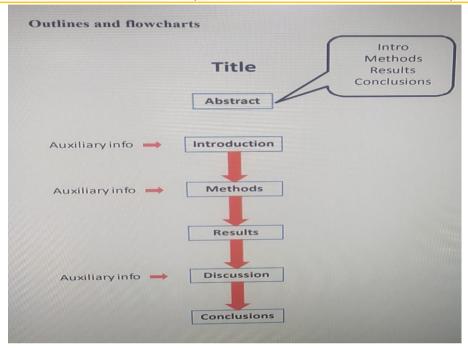




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#### Writing a proposal

To write a proposal, you would do well to follow the above guidelines for writing a scientific paper. There is, however, an important difference. The purpose of a proposal is to convince a potential stackholder to invest money or time in a new idea. You have not yet completed your project, so you do not yet have a complete stery, conclusion or product to show or self. Proposal writing as this as calbilatings because, newfalshy, you are writing about doing something that you haven't already done, at least not to completion. Writing a proposal involves writing when you do not yet know the end of the story, and this makes proposal writing sometimes far more

The basic tenets of writing a successful proposal are as follows

- Introduction/Motivation: Identify an interesting problem, one that not only appeals to
  you, but would likely impact the community. You need to catch the reviewers' attention.
  Explain why this problem is important.
- Background information: Explain why this problem has not yet been solved. Provide some background information summary on the problem at hand. What work has been done, what questions remain open? What results are still discrepant?
- Proposed study: Explain how you would go about testing your hypothesis. This could involve new ways of looking not or synthesizing data. It could involve developing new analytical methods, collection of new data, or developing new numerical models. You would then need to identify what series of data you will be collecting or what types of see models you will develop. Define your over-arching scientific goals. Maintain the big picture here and don't get lost in the details of each method because you are still trying to maintain the method's interest.
- Preliminary data or proof of concept: Now that you've identified a good problem and developed a way of approaching the problem, you need to convince the reader that you are capable of coorpicitions; you reported substy. Simply you, you need to a stabilish competence. You may have a good idea, but if you can't cancute your idea, you've not going to get too far. Thus, you need to show that you have a cocess to appropriate analytical or competition of facilities and two water the shift to operate them. Then you must show that you rehoice of methods works. You can do this by showing examples from other researchers who have successfully implemented your approach. If, however, you agreed as novel, then though the wise to present one preliminary data that gives some credibility to your method or approach, and that, with more investment of time or money, you could do much more.
- Detailed work plan and espected outcomes: After you have captured the reviewers' imagination and infail trust, the next step is to device a work plan. This does not have to be in extractating detail. What is necessity as a function with projected milestones. This allows the reviewer to evaluate whether your proposed goals can be realistically accomplished within a certain time. This is a such if exercise for you because if also forces you to princine. In the work, hay, you can also by any our expected outcomes. Of course, keep in mind that because you are exploring relatively uncharted territory,

your research path will likely change from your initial plans. So do not feel that you are locked into your work plan. Think of your work plan and milestones as a conservative outline of specific tasks and expected outcomes. If your big idea turns out to be wrong or too difficult to achieve, you will at least have generated some of the products outlined in your work plan.

- Details of methods, study sites, logistics, etc.: This section is for details. This is where
  you might want to describe field logistics, sampling procedures, background information
  on study sites, analytical methods, etc. All of the above sections should be catered to
  generalists, but this section is for the experts in your field. This is the part that only the
  experts might appreciate, but would put the generalists to sleep. Think of this section as
  an Appendix. Only after you have completely entranced the reader in your Kool-Aid will
  the reader want to read this section.
- Reference list: Always include a list of cited references. Everything you do is built upon the shoulders of predecessors, so citing relevant literature shows first that you have done your homework and second that you have respect for the scientific community. It is also the best way to keep you humble.

When writing your proposal, you must consider your audience. Although there may be differences in the format of proposals for different organizations, thesis committees, etc., they all still must follow the above basic tenets. Recognize that writing a proposal is akin to a start-up company trying to get investors to buy-in. Recognize that one is likely competing with many other start-ups. So you must catch the investors' attention quickly. You have to excite them and then you have to demonstrate that you are the one, the best one, to do it. Do not be embarrassed to keep your text short, succinct and simple. There are few things more painful than reading a long, wordy and convoluted proposal.

### **Afternoon session:**

## **Research paper writing:**

#### **Reasons for Research:**

Research results can be presented in a variety of ways, but one of the most popular—and effective—presentation forms is the research paper. A research paper presents an original thesis, or purpose statement, about a topic and develops that thesis with information gathered from a variety of sources.





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## Steps of the Research Writing Process-

These are the steps in the research writing process:

- Choose a topic.
- Plan and schedule time to research and write.
- Conduct research.
- Organize research and ideas.
- Draft your paper.
- Revise and edit your paper.

Each of these steps will be discussed in more detail later in this chapter. For now, though, we will take a brief look at what each step involves.

### • Guiding posts to choose a journal:

From aims to scope, values and ethical practice, there are many things to take into account before choosing a journal to submit an article. If you're submitting a paper instead of an article, it is equally important to find the right journal for your paper.

### • Steps to choose journals:

-Adhere to the principles of research integrity and publication ethics.





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- -Identify journals that follow best practices promoted by professional scholarly publishing organizations
- -Avoid publishing in journals that do not have a clearly stated and rigorous peer review process.

#### Journal finder:

**Journal Finder** uses smart search technology and field-of-research specific vocabularies to match your paper to scientific journals. More on how it works.

### • Qualitative & Quantitative research:

Quantitative research is expressed in numbers and graphs. It is used to test or confirm theories and assumptions. This type of research can be used to establish generalizable facts about a topic.

Common quantitative methods include experiments, observations recorded as numbers, and surveys with closed-ended questions.

Quantitative research is at risk for research biases including information bias, omitted variable bias, sampling bias, or selection bias.

### Communicating the research findings - IMRAD

Communication of research findings is the final and one of the most important steps of research process. Research communication is defined as the process of interpreting or translating complex research findings into a language, format and context that non expert can understand.

An articles written without the IMRAD structure will be briefly described.

### **Proofreading:**

The main purpose of proofreading is to improve the quality of the paper, ensuring there are no lingering mistakes, and correcting generalized discourse errors or writing inconsistencies. Essentially, you want to make sure you have a well-defined communication goal. Analyzing whether the content is properly conveyed, and the sentences are syntactically and grammatically well-written, are just two of





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the basic tasks to achieve publication-ready work. Specifically, a perfect manuscript, ready to be published in the most recognized scientific journals.

### **Proofreading Vs. Editing**

Proofreading	Editing
Language formatting for consistency	Improves the overall quality of the text
Writing improvement	Improves any language issues, in accordance with the purpose of the text
Grammar, spelling and typing mistakes elimination	Clarification of expressions

### Session concluded with the feedback and vote of thanks to the Speaker & paticipants:

- Writing research proposal ideally, it will demonstrate the quality and importance of your project as well as your ability to conduct the proposed research.
- The process of writing a proposal allows the researcher to plan and review the steps that will be undertaken in the project.
- A research proposal helps the authors create a roadmap and explain the key concepts to the audience in extreme detail.
- Proposals are informative and persuasive writing because they attempt to convince the reader to do something.
- When writing effective grant proposals it is important to clearly indicate the significance and novelty of the research.
- Workshop clearly indicate the qualitative information

**Reported By:** 

Dr. Nirmala G. Co-ordinator, R & A, BLDE (DU). DIRECTOR
RESEARCHAND DEVELOPMENT CELL
BEDE (Deemed to be University)
Vijeyapura-586103. Karnutaka





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# **Attendance sheet**

Event: WORKSHOP Date: 16/6/2023

**Venue: Department of Medical Education** 

**Topic: Art of Research Writting** 

Name	Designation	Mobile Number	Signature
Dr. Vivek Mashew	JR, & EMO	8891179665	arm of
Dr. Holl Kolshow	JR2 cmb	7907041599	1
Mr. Kolishay	JRD (PardiaWir.	910067696	19
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Dr. Shivanand Condall	The state of the s	9137315454	K
Dr. Vijayalanmi Budhal	, Senior residen	- 8746046624	Sha
Dr. Mandini. T	Asso. pnot	8971784085	H.
Dr. Sonali Chowhury	PG-2ndyor,	8763536622	Do.
Dr. Upasana Sandelya	PG-2 nolys	8404036134	D
Dr Kanika Sachar	PG-2ndyear	7206120368	Dorlle
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Dr. M. Veena Vandona	PGL-3rd Year	779944789	a
Dr. Shilpa K	TR2 Ophehalmology	8197339485	





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Dr. Taima Kulkan	1887. mof	8147824026	R
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Dr Prabhuder	S.R. Em. Med	7022684933	Rels
Dr Anil Bulagond	Associal prop	9945)7-4196	4
Br. CHANNAMPLATPA PATIL	PG. 2nd gr. Med	9482070998	Dane
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Dr Ninad. M.M	medsR	9980370604	· Ribar
Dr. Snehe Tawalkas	Pathology AP AND POND	9008242466	82
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Mrs. Geetanjali Silvijari	Echocardiagraphi	r 8884784101	R
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Dr. Latha.s.	Asst profeso		
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Dr Reshma RS.	PC Anaesthusia	8762343213	Ale.
Dr Anderp	P9- Radiology	7218835321	Phylle
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Or sunavija	PQ Radiology	984828784	8
De Shrimvas. R. Rack	er. Profesor	6281089537	Chan
Dr. Sandep. B: Yankow	Assistant Professor	9739638642	S. B. You Kany
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