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Review Article

An Innovative 12-step Paper Writing Strategy Utilizing Modern Principles of Scientific Writing for Enhancing Successful Outcomes

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Abstract

Most PGs today do not even write a paper from their thesis and of the few who do, most follow the procedure blindly, unaware of its basic principles. The chances of successful outcomes in their paper writing venture culminating in its acceptance, is, therefore, not surprisingly, likely to be very low and the reason for it is simply because knowledge and skills necessary for it are neither taught in biomedical institutions nor are resources on it available easily, covering the issue in its entirety. A paper was, therefore, felt necessary to cover all aspects of paper writing, beginning with the crucial preparatory work, and culminating in the post-submission phase do's, to help our PGs/young researchers achieve best outcomes in their paper writing venture. This paper provides the reader with an innovative 12-step paper writing strategy and primes them on Preparatory work, Journal selection and on writing the paper outline. It also discusses modern principles for composing methodology, results, and discussion, including paragraph construction and provides the reader with suggestions on the relative length of individual sections and sequence in which they need to be written. Finally, it also deliberates on principles to be followed for title, abstract, introduction, and keywords helps decide authorship and guides them to write the all crucial cover-note to editor. It is expected that knowledge contained in this paper, if applied, is likely to generate a quality manuscript which would be hard for the editor/peer-reviewer to reject.

Key words: Paper rejection reasons, paper writing strategy, preparatory work, role of editor/peer-reviewer

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Introduction

Many professional regulatory boards such as Medical/ Nursing Council of India have included publication as one of the criteria to be satisfied before the postgraduate examination. This has been done keeping in mind the fact that research cannot be complete until it is disseminated to a wider audience.[1] Yet postgraduates of various disciples are so wary of writing a paper that the publication rate of thesis work remains below 30%.[2] Reluctance to write a paper has its roots not only in the intense brain work and concentration needed for it but also more due to rejections and returns faced by authors. Irrespective of cause it, however, does indicate that our young researchers do not have a grip over the art of paper writing.[3]

If paper writing is art then like all other art forms, it would also demand additional knowledge, special skills/ competencies.[4] Yet books do not deliberate on such skills/ competencies, nor are they taught in most professional schools, and it is only the rare highly experienced and motivated teacher from whom these can be imbibed. However, with professional teaching/training becoming more and more impersonalized, the possibility of such learning is also diminishing very fast.

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Some literature is available on this topic, but then their coverage, expanse, and quality varies greatly, making them often unsuitable for the average postgraduate student/researcher.[5-8] Likewise, the guidelines/advisories issued by libraries/writing centers of universities though available online may be too general and not of much help to them.[9,10] Similarly, articles on "paper writing" appearing occasionally in specialty journals also do not cover the issue in a holistic way.[11-14]

We, therefore, felt it necessary to share our two-decade paper writing experience of: (1) Helping the researcher draft his paper using the 12-step "paper writing strategy," (2) identifying the target journal using an objective "journal scoring tool," and (3) introducing the principles of writing the title, abstract, introduction, results, and discussion, which would, in turn, produce a good paper.

Strategies and steps for writing a research paper

Resources on paper writing have approached the issue from a variety of perspectives and with differing complexities.[5-14] We recommend an innovative 12-step [Table 1] paper writing strategy which has been tested and found to be useful by scores of our young researchers, a brief of which including its steps/sub-steps is discussed below.

Step I – Getting motivated to write a paper

The first step of writing is to be motivated for it, and the reason why young researchers need to be enthused about it could be one of the followings: (1) It is through papers only that diffusion of new knowledge and advancement of science can take place, even if such knowledge may be trivial only; (2) we do not really understand what has actually been done, till we summarize it in the form of paper, which again should be a motivating factor; (3) we cannot understand our pitfalls until we get critical reviews from peers/experts; (4) papers catalyze networking/collaboration and catapults writer into the core of a scientific community; and last but not the least, paper proves to supervisors/employers/funders that something has actually been done.[15]

Step II – Preparatory work

Preparatory work having been motivated now is the time to take the dive into paper writing. However, it may also be pointed out here that having a working knowledge of one's specialty and grip over the topic of research may not be enough for the dive into paper writing to be successful. Rather some preparation has to be done before it to enhance the chances of a successful outcome. The preparatory step may be conceived of as having four sub-steps as below:

Read a few good journal articles

This sub-step is essential and helps by preventing the author from trying to reinvent the wheel. It gives a feel to the researcher on how the final product should look at completion. It also allows the researcher to mentally juxtapose his work against other similar published work, thereby giving him a clue on how to project and present his work. This step becomes even more helpful if the papers are from the journal being targeted for manuscript submission.[16]

Know the publication process

The next sub-step is knowing the publication process beginning with receipt of the manuscript at journal end and culminating in its acceptance/rejection/revision through peer review. These steps have been depicted nicely in a Japanese journal guideline as reproduced below [Figure 1].[17] Peer review enables an author's scholarly work to be scrutinized by independent experts so as to uphold the standards and control unwarranted claims/unacceptable interpretations.[18]

Understand the role of journal editor and peer-reviewer

Editors of scientific journals are top professional experts of a specialty having wide expertise and experience in their field. Their role is to decide whether the manuscript fits the range, specialization, and aims of the journal, and whether a paper should be rejected, accepted, or revised. The first decision is usually taken based on a preliminary check of the title and cover note. If paper crosses the first hurdle (which very few papers can cross in the first attempt) then only is it forwarded to peer-reviewer/s. The second and more crucial decision on acceptance would be taken later by the editor, after he receives the report of peer-reviewer/s.[19]

Table 1: An innovative 12-step paper writing strategy for enhancing successful outcomes

Steps	Details of action/sub-steps
I	Getting motivated to write a paper
II	Preparatory work Read a few good journal articles Know the publication process Understand the role of editor/peer-reviewer Anticipate fate of manuscript and Reason for rejection/revision
III	Journal selection Prepare list of "potential journals" Narrow down to few "candidate journals" Finalize "target Journal"
IV	Download "instruction for authors"
V	Prepare "outline of paper"
VI	Start writing utilizing modern principles of: IMRaD Paragraph construction
VII	Continue writing: Conclusion, limitations, Recommendations, references
VIII	Finalize introduction and title
IX	Write abstract and keywords
X	Manage language/spelling, citation/reference, and plagiarism
XI	Decide authorship
XII	Write a "cover note" for editor

Source: Original

Peer-reviewers are accomplished researchers of standing in their field, and their role is to give a "summary recommendation" based on a detailed objective assessment of the paper and its various sections. Reviewers typically look at "FINER," i.e., feasibility, the interest of the average reader, novelty, ethical aspects, and relevance, while also checking whether the journal's structural guidelines have been followed, and whether it is accompanied by ethical clearance certificate and conflicts-of-interest declaration, and that there are no major linguistic issues. Above all, they are on the lookout for papers likely to receive higher citations.[20]

Anticipate fate of manuscript and reason for rejection/ revision

Rejection of manuscripts is commonplace these days. Byrne *et al.* nicely sum up the fate of the average manuscript [Figure 2] while the main reasons for rejection/ return have been summed up by Cerejo [Figure 3].[21,22] These reasons may be grouped as lack of originality, flaw in methodology, statistical, sampling and ethical issues, mismatch with the scope of journal/non-adherence of guidelines, poor organization of sections, poor quality of visuals, bibliographic/citation errors, and language/ spelling issues. Being aware of these helps the researcher to take suitable preventive action throughout the research cycle, right from its conception.

Step III – Journal selection

The third step preparatory to writing is journal selection. Manuscript support agencies such as Editage/Enago[23,24] also advocate a particular procedure for it, but we recommend an objective procedure which has two-substeps.

Preparing a list of "potential journals" and narrowing it down to few "candidate journals"

The simplest way to prepare such a list is to discuss it with experienced peers/supervisors. Since journals do not accept articles indiscriminately, this list has subsequently to be narrowed down, for which one may pose questions regarding (w.r.t. key message, quality of findings including design and sample size, and seekers of this new scientific information). Or in other words, the long list of potential journals now has to be narrowed down to a few candidate journals which are "most appropriate as well as relevant."

Finalizing the "target journal"

The next sub-step is the finalization of target journal using an objective journal selection process using a scoring tool [Table 2] which has been tested extensively by scores of young researchers and found to be quite useful. This tool consists of ten parameters, namely: Journal type, journal indexing agency, impact factor, scope matching, geographic location, respect of journal and its readership, reviewing process, decision time, acceptance rate, and publication charges. Awarding weight of 1–3 to each item yields a total score of 10–30. Journal with higher score should be preferred, though the author may use his discretion and common sense also. A brief description of constituent parameters is given below.

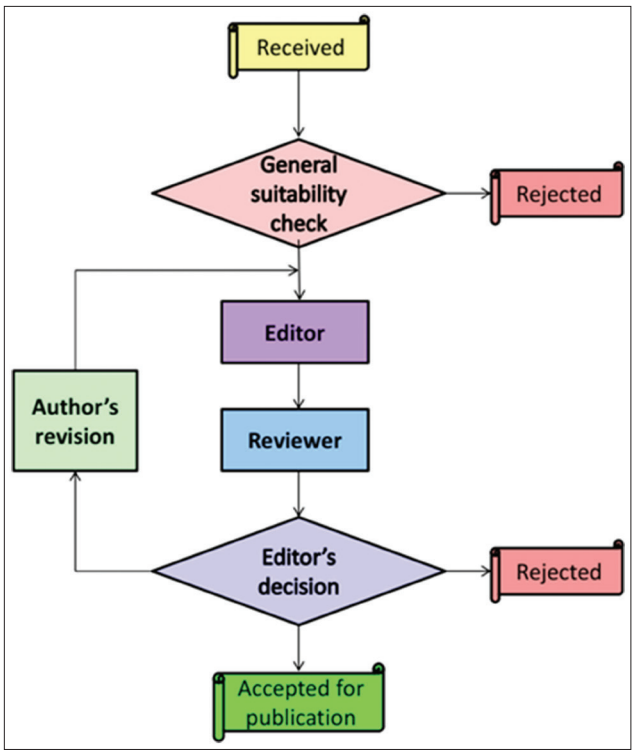

Figure 1: Steps of the publication process Source [18]

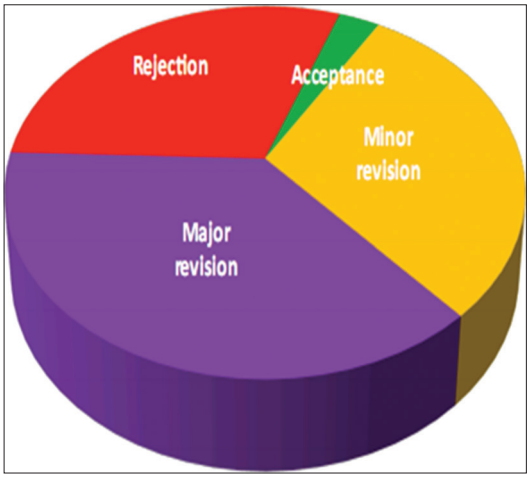

Figure 2: Fate of manuscript received by journal Source[21]

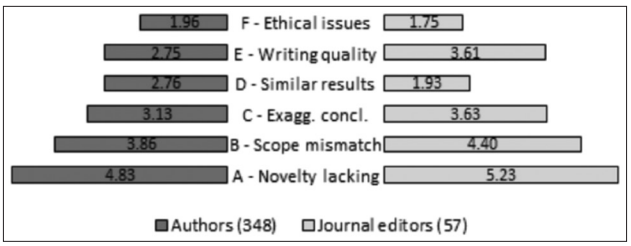

Figure 3: Reasons for rejection of manuscript Source[22]

1. Journal type: Most biomedical journals follow the subscriber accessed (SA) pattern where only individuals/institutions paying subscription can access them and authors do not have to pay anything. The other model is open access (OA) where readers do not have to pay anything for viewing papers, but authors generally have to pay an article publication/processing

Table 2: Scoring tool for selecting target journal

Parameter	Comparison of Journals (weightage)*	
	x	*Y*
Journal type (1/2/3)		
Journal indexing (1/2/3)		
Impact Factor (1/2/3)		
Geographic location, respect, and readership (1/2/3)		
Scope (match) (1/2/3)		
Frequency of publication (1/2/3)		
Reviewing process (1/2/3)		
Decision time (1/2/3)		
Acceptance rate (1/2/3)		
Publication charge (1/2/3)		
Total score		

Source: Original. *See text for weight of individual parameter

charge (APC). Some OA journals are funded by universities/government agencies (e.g., BioMed Central and PLoS journals) where authors also may not have to pay any APC. OA journals also have the advantage that they usually permit authors to retain copyright and permit readers to use, share, and build on it further as per the terms of Creative Commons\ License leading to wider dissemination. Weightage of 1,2, or 3 may be given to SA, OA with APC, and OA without APC, respectively.[25]

2. Journal Indexing: Indexing is a service that a publisher/consortium of publishers provides to make journal contents searchable from a database using subject headings, keywords, author names, etc. Index Medicus had been the most accepted indexing system in the past which continues now as MedLine/PubMed. Newer indexing systems approved by MCI as of 2018 are Embase/Excerpta Medica and Index Copernicus (IC). In addition, we now also have science citation index (SCI), SCI Expanded, Scopus (of Elsevier), Ebsco, ProQuest, HINARI, etc., and a host of other regional agencies. The prestige of a journal is considered to be high if they are indexed by multiple agencies.[26] We suggest that PubMed/Medline be given weight of 3, Embase/Excerpta Medica, IC, SCI/E, Scopus, Ebsco, etc., be given 2, regional/local indexing agencies be given a weight of 1 and those without any indexing be given no weight.
3. Journal impact factor (JIF): It is the numerical value allotted to a journal based on the number of citations its articles (other than editorials and letters to editor) received in past 2 years. Clarivate analytics' IF published in journal citation reports is the most reliable in this respect. We suggest that weight of 1,2, and 3 be given to journals having IF of 0.5–2, 2.1–5, and >5, respectively. However, researcher should use his/her discretion with respect of journals which do not have IF inherently (e.g., new journals and those indexed with copernicus, ProQuest, and HINARI) or have some other technique of rating (namely, Citefactor, global impact factors, and Global Institute for Scientific Information JIF).[27]
4. Geographic location/standing, scope of journal and frequency of publication: International journals may be given a higher weight (3) in view of their greater prestige and reach as compared to national (2) and regional (1) ones. Weight may also be given to a journal based on the extent to which the work being reported on matches with the scope of the journal, for example, exact match = 3, matches somewhat = 2, and does not match = 1 or even 0. The frequency of publication which decides the number of papers that can be accommodated in each issue should also be taken note of and given a weight accordingly, for example, monthly = 3, quarterly/bimonthly = 2, and 6 monthly/yearly = 1.
5. Review process, time taken for decision, and acceptance rate: Peer-reviewed journals with double-blind review process (where authors and reviewers do not know each other), which is currently the gold standard, may be given weight of 3, followed by 2 for single-blind review and 1 for no peer-review. Time taken by journal's editorial board for communicating article decision, often indicated in the journal's home page, may also be given appropriate weight of 3–1 (e.g., <45 days = 3, 45 days to 3 months = 2, and > 3 months = 1). Another crucial journal information necessary for deciding the target journal is "acceptance rate." This information is, however, withheld by most journals, and if given, the researcher has to check cautiously whether the denominator is "total manuscripts received" or "papers forwarded to reviewers only." Further, generally prestigious journals may have low acceptance. We, therefore, suggest that weight of 3 may be given for acceptance rates <5%, 2 for 6–9%, and 1 for acceptance rate ≥10%. Although this may be objected on as being arbitrary, this is the best we could do.
6. Publication/processing charges: Last but not the least, author must also take note of the publication/processing charges which may range from practically free (weightage 3) to few thousand rupees (weight 2) or even a couple of thousand dollars (weightage 1).

Step IV – Inspect download target journal's "instruction for authors"

After the target journal has been identified, the researcher must visit the journal's website, read carefully, and download the instruction for authors. This step is very important and saves time and energy which would otherwise be wasted to edit and change the paper's format to align it with the journal's specific requirements.

Step V – Prepare an outline of the paper

The last preparatory step, and probably also the most important, is the drafting of a paper outline consisting of: (1) Tentative title, (2) objectives of paper, (3) a listing of

sections to be included, and (4) a listing of tables and graphs. While sections would mostly revolve around IMRaD (i.e., Introduction, Methods, Results and Discussion) format, but the researcher has to be appreciative of the target journal's specific requirements. In our experience, it is easiest to begin by identifying the tables first (from the main thesis) and then work backward completing the other parts of the outline. The outline gives an idea whether the paper when completed would form a continuous whole wherein individual sections would also be well connected to each other. It also hints beforehand whether additional analysis and/or visuals (besides what is already in the thesis) would be needed. It may be redundant to say that outline may have to be revised a couple of times and its final concurrence must come from an experienced peer/supervisor.[28,29]

Step VI – Start writing the paper

After the above five preparatory steps have been executed and the outline of the paper is in hand, now researcher can actually start writing the paper. The format used by most biomedical journals is the IMRaD format, which might already have been used by the researcher during thesis writing. However, experience tells us that most researchers, including mid-level teachers, are not fully conscious of the principles to be followed while composing individual sections of the paper, even though a quality paper cannot be produced without adhering to these. We, therefore, give a brief overview of these principles.

General principle of IMRaD format

A paper is considered good if it has the ability to engage the audience in an imaginary conversation to satisfy the queries likely to arise in the mind of a reader. These queries are: (1) Why did the writer start the research? (2) What did he do? (3) What did he find? and (4) What do the results mean? The IMRaD format consisting of introduction, material and methods, results, and discussion answer these very questions.[30]

Principles to be adhered for individual sections

Since most PGs would have gone through their thesis writing, reflexively/superficially it becomes imperative that they are made aware of the principles to be kept in mind for writing these individual sections.

- Methodology: Methodology is considered to be the heart of a paper and it must contain a "detailed exposition of the research design" including all such details which are necessary for the validation of its findings and/or its replication by another researcher in some other settings. It should be organized into subheadings, namely research design, hypothesis, sample size, sampling technique, key variables of the study, data collection instrument and reason for using it, and reported in the *past* tense. It should also include the specimen collection method, biochemical tests (if any), ethical issues and their handling, technique used for data analysis and tests of statistical significance.
- Results: This section reports the findings of the study through text and statistical data. Only such data/tables have to be included which are essential to answer the research question/s directly. Simple descriptive tables are to be used for depicting background information while complex tables may be used for deducing association and/or proving the hypothesis. It is preferable to give no >2–3 tables and 1–2 graphs/figures. The purpose of the graph/figure is two-fold: (1) To break the monotony and (2) to draw attention to key findings. The visuals have hence, to be decided very thoughtfully and not casually. Explanation and interpretation for the findings have to be avoided and kept aside for discussion section (unless journal desires results and discussion in the same section). Results have to be written in past tense and organized to run parallel to the hypotheses/research questions of the Introduction section.[31]
- Discussion: This section is actually the closing argument of the study and is hence, quite crucial. Its importance also stems from the fact that it serves as an indicator of the researcher's ability to think critically and introspectively. Discussion demonstrates how the study's findings have benefitted the reader's understanding of the research problem and taken him beyond where it stood at the close of the introduction. Its key ingredient is the author's "subjective interpretation" of the findings, in light of what was already known, by comparing and contrasting with what other authors have found. It has to be presented in the present tense and also organized to run parallel to the research question of introduction and findings of results.[31]

Discussion should include the following: (1) A statement of the main findings; (2) comparative assessment of other similar studies including their main findings, strengths, and weaknesses; (3) overall meaning of the study and its possible underlying mechanisms; (4) implications this new knowledge has in the context of clinicians/policymakers, (5) strengths and weaknesses of the study; (6) conclusion; and (7) questions still remaining unanswered including future research recommendations.[32]

Relative length of sections

Another practical issue in the writing of a paper is the relative/individual length of sections. Although there is no set norm on this issue, we suggest that the length of the sections of IMRaD format may be kept as background and justification 20%, methods 25%, results 35%, and discussion 20%.[33]

Sequence of writing

A key issue that most researchers are faced with is with regard to the sequence in which various sections of the paper are to be approached. There is no unanimity among researchers on this issue, though, in our opinion it is best, to begin with methodology first followed with results. Discussion and conclusion can be dealt with next, while introduction and abstract should be left for the last. Title finalization can be done as the final step of writing. This sequence of writing, which we have given the acronym of

"*MRD-DC-T*" as depicted in Figure 4, has been found by our students not only to yield a better paper but also save on time and energy.[31-33]

General principles of paragraph construction

Knowledge of IMRaD principles cannot, however, guarantee a good paper if the researcher is unaware of how to compose a paragraph, the basic unit of any written communication. There are at least five basic principles which have to be kept in mind during paragraph construction. These are: (1) Each paragraph should deal with only one "controlling idea" which is indicated in its opening/topic sentence; (2) all the other sentences of the paragraph should be related to the controlling idea with some trying to explain it further, and some trying to support it with evidence; (3) the later part of the paragraph should conclude/summarize the connection between the controlling idea and the argument/information contained in the body of the paragraph; (4) include a bridge sentence at the tail end for smooth transition to the controlling idea of the next paragraph; and (5) the length of paragraphs should be more or less the same (approx. 100–200 words). If a paragraph is too long, it may contain more than one controlling idea, and it should then be split into two/more, each having only one controlling idea.[34]

Step VII – Write the remaining parts of paper

With the main paper having been written now is the time to round it up with conclusions, limitations, recommendations (these are actually parts of discussion itself), and references. principles to be followed for.

Conclusion

The purpose of the conclusion is to zoom out the reader from the current study and place the topic in a larger real-life context (after having convinced him through results and discussion). This is practically achieved by ending the paper on a broad note with some take-home knowledge and by including specific advice for the future or by making a prediction. It should commence with a brief restatement of the hypothesis, the key findings, and inference drawn in light of present findings and that of others, emphasizing on the larger implications of the study. One should, however, be cautious of judgmental biases and not be swayed into drawing too far-fetched conclusions.[35]

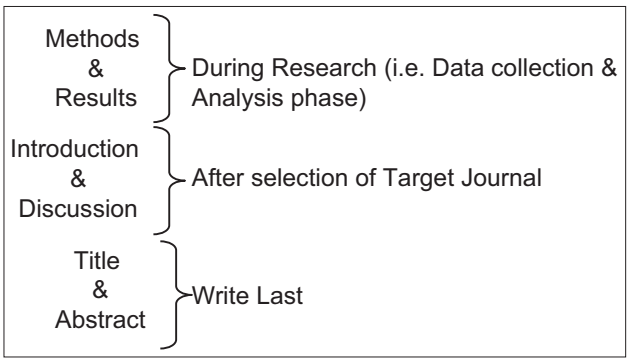

Figure 4: Order of writing research paper sections – "MRD-DC-T"

Limitations

These are the conditions/influences which cannot be controlled by the researcher but which, nonetheless, places restrictions on either the design methodology or conduct of research or the drawing of conclusions or all of these. There cannot be any research which does not have limitations. Stating the more important of these honestly and explicitly, demonstrates that the researcher had the foresight of these though it was outside his capacity to control them. One has, however, to be cautious not to include too many limitations; otherwise, the whole premise of research may be jeopardized.

Recommendations

These are "critical suggestions regarding the best course of action to be taken in a certain situation" and may also include an identification of areas of further research. Recommendations must be based on "data obtained from research" and not be speculated. Recommendation/s should begin with an action verb such as promoting, making, etc. Sometimes, there may not be any worthwhile recommendations and researcher need not be dejected with such reality.

References

Referencing demonstrates that research has been done after appropriate and adequate academic reading. It also gives an opportunity to subsequent readers to trace the sources and check independently whether they support the author's point of view. Including all resources which have been cited in the text is mandatory and not including these may lead to charges of plagiarism. The editorial team generally makes it a point to scrutinize this part very seriously, often using specialized software. Including an appropriate and correct list of references, which is also of adequate length, is, therefore, crucial for winning the acceptance. There are many ways of referencing resources and most biomedical journals currently follow the Vancouver Style.[5]

Step VIII – Write an introduction and finalize the title

Principles of writing an introduction: Introduction serves three functions: (1) Draws reader's attention and arouses curiosity, (2) provides the necessary background information, and (3) establishes the necessity for research. The importance of introduction can be gauged from the fact that if this part has been written nicely, then only the reader would continue to read further else he would move on to something else. The first function may be served using some well-known quote or giving some interesting statistics. For the second function, a brief summary of what is known about the topic and what are the gaps in current knowledge may suffice.[36]

Background information should not include what is common knowledge and can be found in textbooks of concerned specialty nor should it contain data/conclusions drawn from the work itself. The background information may begin with a broad topic first (e.g., tuberculosis) moving

on to some well-identified focus area (e.g., diagnostics) before finally decidedly attacking the specific research issue (e.g., microscopy). The third part of the introduction is "justification" which establishes why the topic is important. Justification must specify the impact of the gap in knowledge and how knowledge gained through research is likely to help. The last part of the introduction presents the "research question" in an appropriate format, namely aims and objectives or hypothesis.

Principles of composing title

The title is undoubtedly the most important and most frequently read part of any paper. It is also the part which is read first and on which it depends whether the reader (and also the journal editor) would read it any further or move on to another. The title has to be appropriate and adequate summarizing the main idea of the paper using minimum possible words. It must depict the type of study, general objective of the study, key variable/s, participants, and settings in which the study has been conducted. It should convey a positive impression and be able to generate reader interest but without being too catchy/funny.[37,38]

As a thumb rule title should not be >15 words long, nor contain unnecessary words (e.g., A study of), grammar, abbreviations, acronyms, and quotation marks/quotes. It should also not end in a question/exclamation mark or with a full stop. Ideally, it should be a declarative statement with the first letter of each word written in capital. The following steps may be taken to construct an appropriate title: (1) Ask yourself what your research is all about and write it down; (2) identify keywords and construct a sentence from these; (3) delete unnecessary words and grammar; and (4) read it aloud to check whether it captures all salient aspects. Note that, while writer has to begin with a tentative title but its finalization is done after the writing process is complete.

Step IX – Write the abstract and keywords

With all the parts of paper having been written now is the time to wind up by writing the abstract and its keywords which also necessitates the adherence of certain principles.

Principles of abstract

Abstract is simply a miniaturized version of the full paper. It may be restricted to just one consolidated paragraph (of approximately 250 words) or may be structured to cover all the important sections of the paper, namely, the purpose of the study, the research problem(s), the study design, key findings, and a brief summary of interpretations and conclusions. Abstract is the second most frequently read part of a paper, next only to title. It gives the reader a summary of the whole paper and also helps the reader decide whether they want to read the rest of the paper or not. It should be written in the last.[34]

Principles of deciding keywords

Keywords are very crucial for any paper as these help not only to describe the study correctly and adequately but also because without carefully chosen keywords efficient retrieval from repositories/databases would not be possible. Most papers have four to five keywords, with each keyword itself being a phrase consisting of 2–4 words. Single words are to be avoided as keywords since they lead to many false matches, and hence leads to inappropriate retrieval. While identifying keywords for his paper, author should also keep in mind medical sub-heading terms used by PubMed, because correctly identified keywords would lead to retrieval of the paper in an orderly fashion during PubMed search (which is one of the most commonly used search engines these days) and also lead to enhanced citations.[39,40]

Step X – Manage language/spelling, citation/reference, and plagiarissm

Too many grammatical/spelling errors may lead to manuscript rejection. Besides counting on self-help and that of supervisor/peers, the help of appropriate software such as grammarly can be taken.[29] However, more important that language issues are plagiarism issues and these can be detected before-hand by the researcher using appropriate software such as Turnitin, Duplichecker, Whitesmoke, and Plagiarism checker. It may also be noted that most plagiarism checkers do have inbuilt grammar/language checking capabilities also. Moreover, even more important for the researcher is to cite and reference every piece of research work/publication that has been used/cited. Failure to do so may be viewed as plagiarism with its attendant consequences. This aspect may be managed using appropriate software such as RefWorks, Zotero, EndNote, and Mendley. Some authorities recommend RefWorks for undergraduate/master's students and EndNote for postgraduate research students/faculty.[41-43]

The University Grants Commission (UGC), the highest controlling authority of higher education in India has come out with guidelines to prevent and control plagiarism. UGC has defined plagiarism and its penalties as falling into four categories: (1) Level 0 offence (similarities up to 10%, i.e., minor similarities) – no penalty; (2) level 1 offence (10% to <40% similarities) – such student shall be asked to submit a revised script within 6 months; (3) level 2 offense (40%–60% similarities) – such student shall be debarred from submitting a revised script for a period of 1 year; and (4) level 3 offence (above 60% similarity) – such student's registration for that program shall be cancelled.[44]

Step XI – Decide on authorship

Principles of deciding authorship

Lead authors often find it difficult to decide which individuals should be included as authors. The International Committee of Medical Journal Editors has issued guidelines in this respect, according to which four criteria have to be met for qualifying to be an author, which are: (1) Substantial contribution in conceptualization/designing of study and/or its analysis and interpretation, (2) important intellectual contribution

in drafting the paper/revising it critically, and (3) direct contribution in approving the final version of paper, and (4) accountability for all aspects of the work. Authorship is not justified just on account of arranging funding or involvement in data collection or supervision. This type of involvement qualifies for gracious "acknowledgment" only.[45]

Step XII – Write a cover note to journal editor

The last step in the process of sending the manuscript is the drafting of a cover note which is, unfortunately, a greatly neglected aspect. The cover note assumes critical importance because the journal editor is likely to readjust the title and this "cover note" to come to a decision regarding the worth of the paper particularly whether it deserves further scrutiny by a peer-reviewer or not. The cover note should, therefore, be quite formal (preferably written on letterhead) and include four short paragraphs. The first paragraph should introduce the author/s; the second should focus on the manuscript (particularly the justification of the study, its hypothesis, and methodology); and the third is a "miniaturized version of key findings" and how these contribute to the field. The fourth and last paragraph specifies "the reason for sending it to the journal concerned."[46]

Post submission do's

Post submission do's having submitted the paper to a journal does not mean that all work is over. The author has next to be prepared mentally for handling the feedback/criticism received from the editorial team. He has in particular, to be willing to respond to the feedback/criticism in an objective, meticulous and time-bound manner, and the satisfaction of the referees. Sometimes he may also have to be willing for re-submission with extensive revisions. Further, even after acceptance has been conveyed, the author still cannot just sit and relax that is because more additional steps have now to be undertaken to increase the visibility and outreach of his paper. For this, a wide variety of modern communication channels (namely, Facebook, twitter, and emails) can be used proactively.

Conclusion

Meticulous planning and conduction of research may help sail through the initial phases of research but cannot guarantee a good manuscript, nor a favorable outcome which is undoubtedly a daunting task and demands thorough knowledge and skills of various facets of paper writing. This article tries to impart this knowledge and skills, through an innovative 12-step paper writing strategy, beginning with steps preparatory to writing, selecting a target journal, and utilize the modern principles of writing to produce a quality manuscript which would be difficult for the editor/peer-reviewer to reject.

References

1. Medical Council of India. Postgraduate Medical Education Regulations; 2000. New Delhi: Medical Council of India; 2017. p. 26.
2. Dhaliwal U, Singh N, Bhatia A. Masters theses from a university medical college: Publication in indexed scientific journals. Indian J Ophthalmol 2010;58:101-4.
3. Vasconcelos SM, Sorenson MM, Leta J, Sant'ana MC, Batista PD. Researchers' writing competence: A bottleneck in the publication of Latin-American science? EMBO Rep 2008;9:700-2.
4. Clemow DB, Wagner B, Marshallsay C, Benau D, L'Heureux D, Brown DH, *et al.* Medical writing competency model section 2: Knowledge, skills, abilities, and behaviors. Ther Innov Regul Sci 2018;52:78-88.
5. Turabian KL. A Manual for Writers of Research Papers, Thesis and Dissertations. 7th ed. Chicago: The University of Chicago Press; 2007.
6. Zeiger M. Essentials of Writing Biomedical Research Paper. 2nd ed. New York: McGraw Hill; 2000.
7. Dawson C. How to report your findings. In: Practical Research Methods a user-Friendly Guide to Mastering Research Techniques and Projects. Oxford: How to Books Ltd.; 2002. p. 131-44.
8. Mahmoud F, Fathalla MF, Fathalla MM. Writing a Scientific Paper and Publishing a Scientific Paper. In: A Practical Guide for Health Researchers. World Health Organization. Cairo: Regional Office for the Eastern Mediterranean; 2004. p. 130-61.
9. The Writing Centre. University of Wisconsin. Madison: University of Wisconsin; 2018.
10. Wiki How to do Anything How to write a Research Paper and how to publish a Research Paper, California; 2018. Available from: http://www.Wiki How.com, wiki How Inc. [Last accessed on 2018 Dec 07].
11. Van Meerbeek B, Frankenberger R. How to "Sell" your paper to a peer-reviewed journal. J Adhes Dent 2016;18:95-6.
12. Cooper ID. How to write an original research paper (and get it published). J Med Libr Assoc 2015;103:67-8.
13. Kotur PF. How to write a scientific article for a medical journal? Indian J Anaesth 2002:46:21-5.
14. Saper CB. Academic publishing, part III: How to write a research paper (so that it will be accepted) in a high-quality journal. Ann Neurol 2015;77:8-12.
15. Sherman D. Why is it Important for Researchers and Scientists to Publish their Work. Available from: http://www.Quora.com. [Last accessed on 2014 Nov 13].
16. Natarajan A. What, where, and how to publish. BMJ 2007;334:161.
17. The Japan Society of Applied Physics. How to Write a Research Paper. The Japan Society of Applied Physics; 2018.
18. Kelly J, Sadeghieh T, Adeli K. Peer review in scientific publications: Benefits, critiques, and a survival guide. EJIFCC 2014;25:227-43.
19. Tetzner R. Roles and Responsibilities of Journal Editors in Peer-Review Processes. United Kingdom: Proof-Reading-Service Devonshire Business Centre; 2017.
20. Harten J. How Reviewers Look at Your Paper Your Top 9 Questions Answered. Connect Authors Update 12th November 2014. Amsterdam: Elsevier; 2014.
21. Byrne DW. Common reasons for rejecting manuscripts at medical journals: A survey of editors and peer reviewers. Science 2000;23:39-44.

22. Cerejo C. International journal editors and east asian authors: Two surveys. Learn Publ 2014;27:63-75.
23. Das A. Journal Selection Tips How to Choose Journals for Submitting your Paper. Cactus Communications, Editage Insights; 2018.
24. Enago Academy. Selecting the Right Journal: A Quick Guide (Part 1 to 3); 2018. Available from: http://www.EnagoAcademy.com. [Last accessed on 2018 Dec 16].
25. Chaalan T. Traditional v Open Access a Brief Introduction to Traditional vs. Open-Access Publishing Arguments and Problems. Medical Student Research Journal. Michigan: Michigan State University; 2017.
26. Dhammi IK, Haq RU. What is indexing. Indian J Orthop 2016;50:115-6.
27. Sharma M, Sarin A, Gupta P, Sachdeva S, Desai AV. Journal impact factor: Its use, significance and limitations. World J Nucl Med 2014;13:146.
28. Psychology Writing Center. University of Washington. How to Make an Outline. Washington: University of Washington; 1997.
29. Editage Insights. How to Create an Outline of your Research Paper.
30. Editage Insights. The Complete Guide to writing a Brilliant Research Paper; 2018.
31. Carnegie Mellon University. IMRAD Cheat Sheet. Global Communication Center. United Status: Carnegie Mellon University.
32. USC Libraries Research Guides. Organizing Your Social Sciences Research Paper: The Discussion. California: University of Southern California; 2018.
33. Academia. Which Section to Start with when writing a Research Paper. Available from: https://www.academia.stackexchange.com/questions/27408/which-section-to-start-with-when-writing-a-research-paper [Last accessed on 2018 Jun 12].
34. University of South California. Organizing Your Social Sciences Research Paper: Paragraph Development. 31st July, 2018.
35. Docherty M, Smith R. The case for structuring the discussion of scientific papers. BMJ 1999;318:1224-5.
36. Bahadoran Z, Jeddi S, Mirmiran P, Ghasemi A. The principles of biomedical scientific writing: Introduction. Int J Endocrinol Metab 2018;16:e84795.
37. Grant MJ. What makes a good title? Health Inf Libr J 2013;30:259-60.
38. Rajagopalan J. Five Simple Steps to write a Good Research Paper Title. Editage Insight Blog. Nov 18; 2014. Available from: https://www.editage.com/insights/5-simple-steps-to-write-a-good-research-paper-title? [Last accessed on 2018 Dec 05].
39. NIH, US National Library of Medicine. Available from: https://www.nnlm.gov/sites/default/files/shared/files/trifolds/meshtri.pdf. [Last accessed on 2018 Dec 05].
40. Academic How to Create Keywords for a Research Paper. Available from: https://www.editage.com/insights/how-to-create-keywords-for-a-research-paper. [Last accessed on 2018 Dec 05].
41. Wikipedia. Comparison of Reference Management Software. Available from: https://en.wikipedia.org/wiki/Comparison_of_reference_management_software. [Last accessed on 2018 Dec 10].
42. University of California. How to Cite Tools, Tricks, and Tips for Managing Citations: Citation Software Compare and Choose. This Guide explains several ways to keep your Article and Book Citations Organized so you can use them in your Papers. San Diego: University of California.
43. Pappas C. 12 Best Free Online Bibliography and Citation Tools (2017 Update). Feb 18th, 2013. Available from: https://elearningindustry.com/12-best-free-online-bibliography-and-citation-tools. [Last accessed on 2018 Dec 07].
44. Government of India. University Grants Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations. India: Government of India; 2018.
45. Committee on Publication Ethics (COPE). Principles of Transparency and Best Practices in Scholarly Publishing Guidelines. Committee on Publication Ethics (COPE); 2014. p. 1-3.
46. Enago Academy. Five Cover Letter Tips that can get your Manuscript Accepted Faster. Crimson Interactive Inc.; 2018. Available from: http://www.Enago.com. [Last accessed on 2018 Dec 07].