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Editorial Review Article

STRATEGY OF WRITING SCIENTIFIC RESEARCH ARTICLE – A FRAME WORK FOR SUCCESS

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ABSTRACT:

Writing Scientific Research Article is intended for early career researchers in the science is very challenging task. One of the key concepts in the field of research is audience of scientific article. Publishing of any article to receive due recognition for researcher ideas and result which attract interest from other in the area of research. This article represents the strategy how to write a good manuscript in unorthodox manner. The conventional research article structure AIMRaD (Abstract, Introduction, Materials and methods, Result & Discussion) in science generally common with slight variation field to field and from to from journal. The scientific article always well-thought-out initial section introducing the background and justification of the work to the wide range of expected readers, monitored by concise report of the positive finding and a short discussion. Success as a researcher is that publishing scientific article to adopt a strong frame –work for research writing, plan to meet criteria referees and editors, select the journal and prepare the manuscript content.

KEYWORDS:

Manuscript, Publication, Referees, Editors.

INTRODUCTION:

The main aim of this article is structural framework to provide the reader how to improve understanding of the structure and underlying logic of scientific research articles published in English in the international literature. It also briefly covered the overall strategy for turning a set of results into a paper for publication. The process of writing scientific articles is to develop researcher skills developing strategy, developing story, using language is well documented in [1] in vividly. A meaningful scientific roadmap from research to manuscript is well explained [2] to develop unavoidable skill for early career researcher. Writing and publication process skill is sometimes difficult that communicating researcher work and ideas faced with potential criticism. Various unconventional facts as not all researchers is new or of sufficient scientific interest, experiments do not always work, scientific journals have specific requirements which can be difficult to meet. This communication offer frameworks concisely for researcher to structure their thinking and writing for each section of scientific article and for dealing with publication process. A cooperative image is to writing approach, submitting a manuscript to an international journal by way of a system of participating in the international scientific community. The blue-print of your experiment as manuscript is publishing the scientific journal need important recipes, the Materials and Methods, draft the results, formulate the outlier of a discussion and writing a working conclusion tidied up written sufficient perspective the title and abstract.

COMPOSING THE SECTIONS OF A RESEARCH PAPER

TITLE – A title must be concise and informative to attract busy readers in context target audience. Sometime literature scanning is very much helpful for efficient title. The culture of effective title in our own experience to drafted at the end of writing process.

ABSTRACT – The blue print of abstract is sometime generally say that we did, saw and concluded. Abstract should be single lean paragraph and written complete sentence with less than (200-250) words. Using abbreviation in abstract must be in parentheses when it appears in the text of your paper. Some reputed journal also used graphical abstract to attract busy readers reading whole paper. Skeleton of the simple abstract with explained important subsections. According to (Weissberg and Buker, 1990)[3] as a generally subsection of abstract may written B-P-M-R-C norm. Abstract is summarized as Background information (One of two sentences), the principal activity (or purpose) of the study and scope (One sentence), some information about the methods used in the study (two or three sentences), the most important result of the study (Less than ten sentences), a statement of conclusion (One sentence).

Some journal abstract are explained on the way (1) Objective, (2) Methods, (3) Results and (4) Conclusion.[4].

KEY WORDS – Generally list of key words alphabetically on a separate line after the abstract. Sometime non-standard abbreviations use in key words as short hand must be defined in the main text of your paper.

INTRODUCTION- The task of introduction is basically to give reader a preview of discussion along with respective conclusion pointing out in advance the hole in the scientific landscape that the paper's data will try to fill. Any journal editor and referees is the main audience to search any significant new contribution for publication in the journal. The general skeleton of the introduction mainly governs with five unorthodox stages (Weissberg and Buker 1990).

- 1. Statement about the field of research to provide the reader with a setting or context for the problem to be investigated and to claim its centrality or importance.
- 2. More specific statements about the aspects of the problem already studied by other researcher, laying a foundation of information already known.
- 3. Statements that indicate the need for more investigation, creating a gap or research.
- 4. Statements giving the purpose/objectives of the writer's study or outlining its main activity or findings.
- 5. Optional statement(s) that give a positive value or justification for carrying out the study.

Basically drafting introduction begin stage d, then stage followed by c, a, b and e. Some-time presentation to ensure valid strategy with proper logical flow of the argument. Starting introduction write up always introduce idea, move from general information to more specific information, put old information before new information, make a valid link between sentences, try to include the verb and its subject in the first seven to nine words.

Example- Strategy of language usable [5] as a sentence template (noun phrase), as part of a long term research effort aimed at, this paper presents. The objective of the study was to: (1) determine, (2) analyze; (3) determine and evaluate; (4) establish whether, significantly influence and (5) discuss.

THE METHOD SECTION: Method section launches reliability for the results and also provides enough information about the experimental road map to evaluate the result. Generally accepted method cannot be described in details unless some modification published method. Any type of novel method should be described detail. Materials and method use active verbs as much as possible which make writing less wordy and more direct.

RESULTS: The results govern the content and structure of the whole articles in that sense to write a paper is identifying from your results which is clearly connected your experiment story. The data presentation in a

scientific article aims to clarify the present evidence to support or reject a hypothesis, and record important data and meta-data. The data presentation styles vary with discipline with respective statistics (descriptive, predictive) for various types of data (nominal, ordinal, interval and ratio). Data visualization choice sometimes articulated by various design figure, table. The text of a result sections typically highlighting the important finding which is located on the legend figure or tables where the results can be found.

PRESENTING NUMERICAL DATA- Using statistics property is a skill. Even freely available prepackaged statistical programs need to be used thoughtfully. Numerical data are easily handled by descriptive statistics. Descriptive statistics directly shown intuitive feel with various distribution representation just as a) Size, b) Range, c) Middle (mean, mode and median) d) Spread (Standard deviation, central 50%). Confirmatory and exploratory data analysis-it is a classic technique for proving and disproving hypothesis.Typicall many research projects are explorations. Typically exploratory research is an iterative process and trying to discern emerging pattern in your data. Exploratory statistical packages (SAS) are wonderful tools piles of numerical data.

DISCUSSION: A well known discussion section will help to ensure that result will be both visible and accessible. Skeleton of the discussion a) recap your results b) archive your result and try to make proposal. Discussion section should be two things: First it should present a clear, concise summary of your data, second your data and related data from scientific archives to generate proposal, a generality, a theory, or a model. Relating discussion closely to the paper title, to the introduction and highlighted the key messages which negotiating the strength of claim.

CONCLUSION: Conclusion is nothing but a draft of the discussion. It should summarize the ideas in one succinct paragraph.

ACKNOWLEDGEMENT: The acknowledgement is an addendum to the materials and methods. In simple complete sentences, it leans those people and institutions who gave you advice, information, assistance and materials along with all the source of your financial support.

REFERENCES: Scientific observations are linked together in a complex network of scientific articles. The reference section uses a standardized appropriate bibliographic format. Bibliographic software package are ideal tool for building a library of sources. The exact styles of the bibliographic and text citation formats vary from journal to journal. Much medicine related journals use same format (ICMJE requirements) which are available online at www.icmje.org.

PREPARING A MANUSCRIPT FOR SUBMISSION

Submitting your manuscript to a journal is like entering any competition where success is determined by a group of judges using defined set of selection criteria. The general skeletal of submitting the manuscript.

A) CHOOSING JOURNAL

Choose your target journal before you polished your paper. Selection criteria based of journal throughout reading scientific literature that similar type of article are published previously. Always choosing open assess journal for more visibility of your manuscript. Information about open assess biomedical journals can be found at:http://www.pubmedcentral.nih.gov/about/intro.html, A directory of open access journals can be found at http://www.doaj.org/. After choosing journal, get a copy of its article format.

B) A FINAL REWRITE

According to journal requirement, rewrite the abstract, choose key words to appeal in the title, match figure legends to the journal's style, change text citation to the appropriate style, translate your references into the correct bibliographic format.

C) PREPARING AND SUBMITTING THE MANUSCRIPT

Finished manuscript to the journal some general guidelines apply to both physical and electronic manuscript Font- Use a clean, standard font (Times Roman, Arial etc),

Line spacing- Double space all the text, including references, footnotes and figure legends.

Page number- Number every page your manuscript packet.

Send your manuscript packet with a short, formal cover letter. Letter, give:

The full title of your article

The type of article (Original research paper, brief report, review article, case study, commentary or letter)

The essential point of the article (usually, the main conclusion)

All the author names

A statement that each author has read the article and take responsibility for its content

Detain of any possible conflict of interest.

D) RESPONDING TO EDITORS AND REFEREES.

After sending polished version of manuscript to a journal, you receive an editor's letter and anonymous reviews by 2-4 referees. Based on the reviews, the editor's letter will put your paper into one of three

categories:

- \Box The manuscript is accepted, pending specified changes.
- □ The manuscript requires revision and re-reviews.
- \Box The manuscript is rejected.

SOME SUGGESTIONS AND CONCLUSION:

This article covers up an overall strategy for revolving a set of results into a paper for publication, improving the researcher own scientific writing, improving researcher own draft such as structural check list. It also manages the process for completing a draft of an article on researcher own research results, prepared in the style of the journal to which researcher to submit.

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REFERENCES:

- Margaret Cargill & Patrick O'Connor, Writing Scientific Research Articles –Strategy and Steps, 1st ed. Wiley-Blackwell Publishing, A John Wiley & Sons, Ltd, Publication, 2009.
- Michael Jay Katz. From Research to Manuscript-A Guide to Scientific Writing.2nd ed. Springer Science + Buiseness Media B.V; 2009.
- 3. Weissberg & Bucker. Writing Up Research, 1st ed.A John Wiley & Sons, 1990.
- 4. Jayanta Kumar Maji, Sohim, V.J.Shukla. Application of multivariate curve resolution alternating least square (MCR-ALS) to the study of trikarshika formulation. International Journal of Pharmacy and Pharmaceutical Sciences 2016; 8:238-243.
- Jayanta Kumar Maji. Near-Infrared Spectroscopy: A potential new mean of assessing multicomponent polyherbal formulation on way before and after extraction. International Journal of Pharmacy and Pharmaceutical Sciences 2017; 9:238-243.
- Jayanta Kumar Maji, Shikha Sharma, V.J.Shukla. Image processing and Ultra-Violet and Visible reflectance spectroscopy combined with chemometrics for discrimination as well as authentication powder and extract with anti- diabetic polyherbal formulation. International Journal of Pharma Sciences and Research 2016; 8:325-334.