

Modern Scientific Criteria in a Research Article: Publish or Perish**Yusuf Celik**

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Abstract

The statement “Publish or perish” is an important warning to those working in the scientific field. Modern science is an archive of scientific articles. The aim of the researcher is to make new scientific contributions to this archive. Writing an article is an active part of the research. The article provides the reader with information on the latest developments in the subject and the hypotheses discussed. The scientific archive provides the basis for solving most problems and developing new models. The research is to solve a complex problem and present it to the reader in a clear and simple way. Research is not to put a complex problem into another complex structure. The journal editor requests that the accepted article contains new information. This is a necessary for him and for the journal.

The investigator must empathize with the Editor and editorial board. All journals need the published articles the journal should be cited. Because the impact factor of the journal is very important for the editor and editorial board. The impact factor (IF) is a measure of the frequency with which the average article in a journal has been cited in a particular year. It is used to measure the importance or rank of a journal by calculating the times it's articles are cited. The calculation is based on a two-year period and involves dividing the number of times articles were cited by the number of articles that are citable.

As a result, the conditions for publishing a good publication: it needs to select new title and new subject to contribute to science. The correct selection of research design should be obtained by using the right statistical consultancy, using the right methods and writing the article in a clear and understandable manner.

Key words: Publication, Scientific Article, Scientific writing, Scientific publishing, Criteria in a Research

Introduction

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researcher is to make new scientific contributions to this archive. Writing an article is an active part of the research. The article provides the reader with information on the latest developments in the subject and the hypotheses discussed. The scientific archive provides the basis for solving most problems and developing new models. The research is to solve a complex problem and present it to the reader in a clear and simple way. Research is not to put a complex problem into another complex structure.

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The concept of research is familiar to most people, but it cannot be said that all people have the same understanding of what research is. Research can be identified as: (i) a detailed study aimed at creation or discovery, and, (ii) the simple task of looking up information. For scientists it is the first meaning, where deliberate processes are followed and something original has been designed or discovered,

which is most accurate. A scholar, on the other hand, would perhaps begin answering the same question by narrowing the search to trusted sources, collecting a large set of relevant information, analyzing and synthesizing, then finally creating a new definition based on justifiable criteria (1).

A scientific article is defined as a written and published report describing the original research results. A scientific article must be a valid publication, it should be published in the right place, such as in a peer-reviewed journal or a high-level conference. Several steps have to be taken to prepare a research paper for professional publication. First, the researchers have to ask themselves some preliminary questions to make sure that the studies are designed to answer precisely the research question under examination, that the experiments meet accepted standards and that the process of keeping records of the research work is agreed upon in the target community. Subsequently, the research work has to be assessed constantly in order to be able to decide whether the work is suitable for submission (speaking to colleagues and writing while work is in progress may turn out to be very helpful in this respect). A paper that “records significant experimental, theoretical or observational extensions of knowledge, or advances in the practical application of known principles” is worth publishing (2).

Writing a Good Scientific Article

Eleftheriades JA reported twelve tips on writing a good scientific paper as follows. The author hopes that these

observations will be of some use to the novice or occasional medical essayist and may help in achieving acceptance of manuscripts for publication (3):

1. Good Underlying Research Question.
2. Brevity.
3. The abstract must convey all the cardinal findings and messages.
4. A void Excessive Literature Review
5. A void Excessive Use of Figures
6. One Cardinal Visual Image
7. Careful Final Re-Reading
8. Include Section on Weaknesses of Your Study
9. Avoid Superlatives in Describing your Work
10. The Editor is' Always Right
11. Statistical Consultation
12. Do not be discouraged if your paper is rejected on one or more submissions for review

The goal of a researcher is to present research findings to end users in the most useful way. The “Knowledge Transfer” model, in its simplest form, has three components: creating the knowledge (doing the research), translating and transferring it to the user, and incorporating the knowledge into use (4).

The title and abstract are very important and effective in writing an article or project. Firstly, the title and the summary of the article journal are read. Therefore, both should be written very carefully.

The title and abstract of a paper are critical and are usually revised many more times than the other parts of the paper. Choosing key words carefully increases the chance of the paper being read and cited. The body of the paper follows what is called the Introduction, Methods, Results and

Discussion structure. Submission begins by writing a cover letter that makes the case for the article. Following all the key steps of the submission process avoids early rejection. Respond speedily and graciously and in sufficient detail to reviewers’ and editors’ comments. Following publication, the author should ensure that the published knowledge is disseminated widely. Learning to write successfully takes time and practice (5).

The introduction is the decoration of the research paper. The statements here should be of the kind that will trigger the issue. This section should begin with a researchable question or hypothesis that will reveal the reason for the research. Afterwards, a brief description of the publications related to the subject is given. It should be noted that the interest between the findings of the given researchers and the research problem received is clear.

Matthews JR and Matthews RW reported for the introduction (6): What is the problem, and why should anyone care? In other words, why was this work done? Deal with these questions briefly, interestingly, and as simply as possible. A well-written introduction should persuade colleagues and even non-specialists to begin reading the paper’s text after their attention has been attracted by the title, abstract, tables, and figures. A three-part introduction works well. First state the general field of interest. Concisely present what is already known about the subject of your investigation, referencing the most important publications. Don’t try to mention everything, unless you are writing a review article or a thesis. One to three paragraphs should be enough for most journal articles. Next, present others’ findings that will be challenged or expanded. Explain how you

are hoping to extend or modify what is already known or believed. Provide support for your argument. Finally, specify the question that the paper addresses, and how it does so. This sentence is often phrased in hypothesis form. Indicate your experimental approach. Point out what is new and important about your work. When appropriate, briefly summarize the answer(s) you found.

At the end of the introductory part of the research, it should be able to answer the following questions (7).

- 1- What are the other researches published on the subject?
 - a- What did these researches find?
 - b- What is the relationship with the current study?
- 2- What is the hypothesis of this research? What would it investigate?
 - a- Is the hypothesis clear enough and directly relevant to the research?
 - b- What is the relationship with the current issue?
- 3- What are the expected results in the current research?
 - a- Why were these estimates made?
 - b- Is the evidence necessary to determine the expected results?

The Materials and Methods translates the research question into a detailed recipe of operations. The critical principle is: Every observation that you record in the Results section of your paper must be the product of reproducible procedures that are completely detailed in the Materials and Methods section. The Materials and Methods must be detailed and unambiguous. The Materials and Methods should explain the statistical methods you have used. In your *Statistical Methods* subsection, include citations of your exact sources statistical books, technical papers,

and computer programs. Moreover, when your experiments have been built using a preplanned statistical design, this is the place to explain the details. Materials and Methods section should be comprehensive. It is an instruction manual for *all* the things have done to produce well-defined data. The other parts of the paper, however, will focus on only two or three aspects of that data. After writing a draft of the Materials and Methods section, it's time to explicitly center the paper around its key variables (8).

In the Result section, where possible, try to use the same subheadings in both the Methods and Results sections, so that the reader can easily do a cross-reference. Extensive detailed text may be difficult to follow, and you should carefully consider the inclusion of visual aids (tables and figures) to enhance the impact of key findings. Avoid duplication of information, e.g., text, table, and figure, all showing the same data. Adhere to the limits for the number of tables and graphs allowed (9). This section tends to consist of six to seven paragraphs. It will almost certainly refer you to **figures** and **tables**. You need to comment on these, and draw attention to the main trends (10).

The questions that determine the adequacy of the findings section are (7):

- 1- What statistical methods were applied?
 - a- Are these methods appropriate for the research plan being implemented?
 - b- Were the results clearly written? (Which group is different and which treatment method is effective?)
 - c- Is confidence probability (p) indicated if a group or a result is selective "or" statistical significance is mentioned in the comments on the findings?

Discussion section is the place to draw comments from the results. The discussion section is where the authors elaborate on their analysis of the data described in the results section. This is different from the results section in that the description in the results only deals with the findings and the conditions for specific experiments. In the discussion, in addition to data analysis, the authors could further attempt to put the data into the context of the research question. The authors also have to make justifications as to whether the data support their initial hypothesis and how their findings help to expand the existing knowledge. Normally, the authors would make comparisons of their data with what is currently known in the field and then make statements as to whether their results are consistent with what is accepted. The authors then make their conclusions in the final paragraphs of the Discussion section. Usually, the authors will also discuss possible weaknesses of their study and offer solutions for subsequent studies. In addition, the authors might end off with further suggestions as to the possible work that could be performed in the near future to extend the current work (11). The Discussion section gives you the most freedom. Most authors begin with a brief reiteration of what they did.

Every author should restate the key findings and answer the question noted in the Introduction section (4).

In the world of scholarship, it is not only important that scientists publish their work; but **publish it in a good journal**. It is often said the worth of one's research work can be judged better by the names of journals where the work is published rather than by the titles of the articles that have been written. Selecting an appropriate journal early is important from a logistical viewpoint, as well. Journals have different styles and requirements in terms of sections, style in which abstract is written, permitted word count, way of citing references, etc. If the journal is selected first, the authors can write the manuscript in the way it is required to be written right from the beginning. If the manuscript is written prior to journal selection, the authors need to spend time and effort on altering the article format to suit journal style and requirements (12).

Important databases significantly improve quality and proof in the publication. It is advisable to use only credible databases (at least two or three) which only select high-quality publications that contain the most up-to-date information (Table 1.) (13).

Table I - Main online libraries, catalogues and databases
MEDLINE/PubMed
Excerpta Medica/EMBASE
Scopus
Thomson Reuters' Web of Science
Cochrane Library
Database of Abstracts and Reviews of Effectiveness (DARE)
Cumulative Index to Nursing and Allied Health Literature (CINAHL)
Google Scholar

Conclusion

This article is a draft manuscript to the reader and outlines the process required to publish an article. As a result, the conditions for publishing a good publication: it needs to select new title and new subject to contribute to science. The correct selection of research design should be obtained by using the right statistical consultancy, using the right methods and writing the article in a clear and understandable manner.

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