West Indian Journal of Engineering Vol. 25, No. 2, (January 2003) Invited Theme Paper (Baban & Sankat) 54 - 64

The Guide to Writing and Publishing Research Papers in Peer-Reviewed Journals

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Writing is the best way to communicate new ideas and concepts to colleagues and interested parties worldwide, and through time. The objectives of a research project can only be fulfilled when the findings are published as a scientific paper. Publications should aim towards reaching the wider scientific community at the highest level. Consequently, the best way to disseminate information is through peer-reviewed journals at the international/national level. The science community has reinforced this fact by linking individual personal promotion and Higher Eduation Institutions research ranking directly with successful publication of research papers in quality journals. As a result, large numbers of papers are being submitted for publication. However, unfortunately, every year thousands of papers are either rejected or returned with a request for major revisions. This is on many occasions due to reasons other than the quality of the work. This paper provides guidance on the process of writing and publishing in a peer-reviewed journal. The requirements for organisation, structure, argument development and the composition of various sections in a paper have been discussed with the view to help novice researchers to achieve publications in journals.

1. Introduction

Writing is the best way to communicate new ideas and concepts or to describe certain principles, understanding, development or progress in a particular area of study to other interested parties locally, regionally and internationally and across time. It is accepted that the objectives of a research project are only completely met when the findings are published as a scientific paper (**Lock, 1984**). Furthermore, publication of articles in peer-reviewed papers can benefit the authors in many ways. Such publications are likely to satisfy the criterion for promotion and career advancement worldwide, increase the circle of professional acquaintances, and encourage ideas and responses from interested parties (**Singh & Nitin, 2001**). Therefore, it is something of a paradox that many researchers, both experienced and inexperienced are reluctant to write. This is understandable of the new or novice researcher, who may have little idea of what might be, expected particularly when effective mentoring is not provided. Among more experienced researchers, a dislike for the writing experience in journals may partly be due to a continuing lack of confidence in their abilities.

Writing up is a continuing part of the research process, which should begin shortly into the commencement of a project, and continue to, and beyond its completion. Ideally, research publications need to be aimed at reaching the wider scientific community at the highest level. This is achieved by targeting peer-reviewed journals at the international/ national level. Higher Education Institutions and the science community have acknowledged the need for publications. The huge number of papers submitted for publication to journals reflects this. However, unfortunately, every year, thousands of papers are either

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rejected or returned with a request for major revisions. This process often leads to generating some form of insecurity and doubt about the quality of the submitted work (**DePoy & Gitlin, 1994**). Unfortunately, very little effort is devoted to explaining that a paper can be turned down for a number of reasons other than quality of the work. These often include not targeting the most suitable Journal and readership as well as lacking in organisation and clarity. Recently, there has been a large increase in the number of papers submitted for publication to Journals worldwide (**Singh & Nitin, 2001**). Some could argue that this is caused by institutional requirements for research ranking or the requirements for personal promotion in Higher Education Institutions worldwide. This has made it even more difficult for inexperienced researchers to publish in quality journals.

This paper aims to assist young or more established but reluctant researchers with writing papers that can convey the information in an easy to understand way and stimulate the interest of the reviewers and the editor. It will provide guidance on the processes leading to a successful publication in a peer-reviewed journal. Additionally, it presents advice on the writing up, structure, organisation and clarity of a paper as well as how to target the most appropriate journal and readership.

2. The Concept of Peer-Review

Quality journals have superlative, peer-review standards, whereby authors are not told who reviewed their papers and reviewers are not told who wrote the paper. In some cases, peer-reviewers are informed of the identity of the authors after the manuscript is either accepted or rejected. Peer-reviewers before reviewing a paper are expected to observe two important considerations:

2.1 Confidentiality

All manuscripts are privileged communication. Reviewers are asked to refrain from showing or discussing manuscripts with anyone, except to solicit assistance with a technical point. If a reviewer feels that a colleague is more qualified to review the paper, the reviewer must first request permission from the Journal's editor to pass the paper on. The review and recommendations are considered confidential.

2.2 Conflicts of Interest

If any difficulties are anticipated in writing an objective review, reviewers are asked to return the paper immediately, un-reviewed. If a previous or present connection between the reviewer and the author(s) or an author's institution might be *construed* as creating a conflict of interest, but no actual conflict exists, reviewers are instructed to discuss this issue in a cover letter at the beginning of the review.

Once the task has been accepted, the reviewer will normally be asked to determine the merits of a manuscript and to guide a Journal's editor through his/her report. The determination is based on providing answers for leading questions as well as general and specific comments on the innovation, importance for the readers and so forth, as follows:

(i) Leading Questions

What is the major contribution of the paper? What are its major strengths and weaknesses, and its suitability for publication? Both general and specific comments should bear on these questions. Reviewers would have been requested to emphasise the most significant points.

(ii) General Comments

- Importance and interest to the journal's readers;
- Scientific soundness;
- Originality;
- Degree to which conclusions are supported by the data

(iii) Specific Comments

Reviewers are asked to support general comments with specific evidence on presentation, length, methods used, data presentation, statistical design and analysis, errors, citations and overlap with already published papers.

3. Elementary Issues

If language is not correct and effective, then what is written is not what is meant. Effective writing demands using simple, familiar words with precise meaning rather than those that are vague. Paragraphs should be short and each one should be restricted to a single topic. The traditional language and structure of papers are logical and detached from personal opinion. Interpretations are supported by numeric data. However, the writing processes need to be influenced by the style and expectations of the journal to be considered for publication. In addition, the readership for which a paper is written determines the degree of specificity that should be included. Therefore, the author(s) will need to write in a style which is consistent with the level of understanding and knowledge of the target reader (**DePoy & Gitlin, 1994**). The following are some elementary issues for consideration:

3.1 Getting Started

Examining Section 2 will indicate clearly that planning is a very important element of the publication process. Therefore, the research paper has to be planned carefully by:

- Defining clear and focused objectives.
- Conducting an up to date literature review.
- Utilising relevant scientific methods, approaches and techniques that pay attention to detail and can be followed to reproduce the results.

Before writing commences, authors should consider:

- Deciding on the type of paper, i.e., Scientific and Technical, Application, Subject Review, Industrial Development.
- Selecting the level of the Journal to be published in terms of being Local, Regional or International.
- Examining the readership of the journal, i.e. academic, technical, management or policy-orientated.
- Reviewing a recent issue of the target Journal for structure, style, presentation, referencing format, length and fees, if any, for page charges and illustrations, etc.

3.2 Writing Up Style

When starting to write up the research, the *style* and the *voice* issues will need to be addressed from the beginning. The *style* relates to how to write up the research, which may be determined by the requirements of a specific journal, the readership and the author(s)' preference or by a mixture of all of these factors. Therefore, the author(s) should carefully read the 'notes and guidelines for authors' for the targeted journal. The other issue is *voice*, which has to do with the author(s) articulating and telling the story of the research, and is something that will be likely to develop further with experience. However, examining and making notes of the *voice* used in published papers in the targeted journal can be very useful.

3.3 Grammar, Punctuation and Spelling

Many researchers have difficulties with grammar, punctuation and spelling when they are writing. This is not unusual as in many cases, English may not be their first language. However, an essential element of the paper is communicating the work to someone who reads it. Therefore, it is important to write in a way that the reader will understand. Consequently, the use of 'correct' grammar, punctuation and spelling is essential. Otherwise, this might cause the reviewer to misunderstand or misinterpret the meaning of the work. Furthermore, the readers are likely to be irritated or amused therefore diminishing the author(s) ability to communicate. Reviewers often reject papers simply on the grounds of poor language. In order to communicate ideas effectively in writing, a submitted paper will need to be written in a formal style, which avoids colloquialism. Even if the author(s) think that the quality of the English is sufficient, it is important to be mindful of serious and surprisingly common errors. These often include:

- Using one-sentence paragraphs – paragraphs should contain a number of sentences on the same subject, and then lead on to the next paragraph, which will move the discussion on.

- Beginning sentences with 'joining' words, such as 'but', 'and' or 'because'.

- Including long lists of material in the text. The paper should read as a flowing piece of text, therefore if lists are required, they should be placed separately from the main text.

- Not understanding the full range of standard punctuation forms, including, in particular, the colon (:), semi-colon (;), comma (,) and full stop (.).

- Not paying attention to spelling mistakes, sentences without verbs, and simple typing errors.

3.4 Developing a Rationale for the Research

The main elements for developing a successful and effective rationale are:

i) A Context

This consists of the extensive understanding of the research topic, which might operate at three levels:

(a) The background; for example if the author is an engineer, this will be engineering applications.

(b) The field of study; for example, coastal engineering, sediment transport, etc.

(c) The methodology used; for example bathymetric surveys and mapping coastal currents.

In order to provide an adequate conceptualisation of the research for the readers, a research paper will be expected to mention as a minimum two of these levels. The conceptualisation is likely to form an important part of the early sections of the paper with some reference back to this towards the end of the paper.

ii) Themes

These are the key issues, concepts or questions that have been identified as being of relevance and interest. These will both inform the research, so it will be evident in the contextual discussion, and help to structure the analysis and findings. They are the aspects of the field of study or discipline to which the research is contributing. These themes will need to be introduced early on in the paper, forming part of its context. The author(s) will then need to refer to them throughout the main body of the discussion, as the running thread binding the paper together. A significant part of the concluding sections will also need to be devoted to, in order to reflect on what the research has showed about or contributed to these themes and how they might be explored researched further in the future.

iii) Progression

This relates to how the argument is planned in stages, and how it is divided into convenient portions for the reader. Some aspects of this progression will be dealt with when referring to the use of the introduction and conclusion sections, and suggesting an early conceptualisation and a later discussion and reflection.

iv) Linkages and References

The author(s) will need to control the references rather than being controlled by them. Therefore, it is important to develop an argument and apply the author(s)' interpretation without being swamped by the references published to previous work. The author(s) will be required to provide the summaries, and linkages to determine the order in which to introduce and comment on the references, decide what else to add and how to progress the argument of the research. This will involve establishing the author(s) voice and the argument earlier on in the paper maintaining it as the key thread running throughout and while returning to a fuller evaluation of it at relevant points. As well as returning to the argument, it is common to return to a discussion of existing research, previous findings and understanding towards the end of the paper. Having introduced and critically discussed a selection of this material earlier on, they need to be related or sometimes compared to the research findings once these have been presented and discussed.

3.5 Procrastination

Procrastination is a phase that most researchers go through from time to time i.e., not publishing their research findings early. However, the basic advice to academics and researchers is to read, to critically evaluate the 'state of the art' in a particular subject, to research and to write something. The point is to aim to produce some writing as regularly as possible and then work from that. This is likely to become easier through time, though there will be more and less difficult times throughout. It is recognised that in areas of Science and Technology, satisfactory writing can only occur if the laboratory-based research was done in an approved manner. Hence, the need for absolute care in the pursuit of the research. Nevertheless, the following are some suggestions for overcoming procrastination:

- Research and study relevant publications on a continuous basis.
- Make notes on the references read.
- Draft the structure of the paper and its possible contents.
- Draft the structure for a section.
- Make a list of the points needed to be addressed.
- Aim to write a given number of words each day or week.
- Write up to the word limit, and then start editing it.
- Reflect on the writing and discuss it with someonebody else.
- Try writing at a different time of day, or time of the week.

4. The Organisational Elements of the Manuscript

The main body of the paper is often divided into several sections and subsections. There should be continuity in the presentation. The style of sections and subsections should conform to *the guidelines for preparation of the manuscript* by the targeted journal. If nothing is available, it is preferable to be guided by the previous issues of the concerned journal. The structure of main sections is developed to strengthen the concept of manuscript. The first of these supporting methods is the adoption of informative, descriptive headings of sections and subsections. The choice of these headings is important because well-chosen headings are not only an aid to the reader but also a reminder to the author(s) to keep in focus with the content of each section. Well-designed and placed Illustrations and Tables can significantly enhance communication and the quality of presentation.

4.1 Selecting the Title and Keywords

The title of the paper needs to be self-explanatory about the contents of the paper. Title should not be too long or too short. It should not be more than two lines. The correct title is important as readers mostly select papers by first examining the title. Some Journals require keywords to be given for the paper. Normally, the keywords are less than 10. Keywords are used for abstracting, categorisation, indexing and retrieval purposes. Therefore, the keywords should faithfully describe the paper in terms of the subject techniques and methods, geographical location, environment and so on.

4.2 The Abstract

The abstract is a short section, generally limited to about 150 words, which summarises the essence of the information that is needed by readers. Many researchers who will not read any other part of the paper will read an abstract. Therefore, it should be entirely self-contained (**Singh & Nitin, 2001**). Generally, there are two types of papers, namely review and research papers which may include exploratory, testing out and problem-solving research. The abstract for a review paper is required to provide a road map to the readers of previous research findings. Whilst for a research paper, a good abstract is expected to explain in a clear, logical sequence the scientific/engineering problem, the methodology, data collection, compilation and quality control, the main results, conclusions and the implications of those conclusions. Evidently, it is rather difficult to compress all this information into a few hundred words, which is one of the reasons why good abstracts can be difficult to write. One way of approaching the task is to write a series of one-sentence answers to the list of questions in Section 2.2.

Stringing the series of sentences together can form the basis of a sound, if perhaps, rudimentary abstract. Then, the level of sophistication can be increased by separating out the key sections of the structure into separate paragraphs. The first paragraph will be on the introductory and background material: the aim of the project, why it is important, and the scientific background. The second paragraph would often be the methodology: how to set out to do the research and the techniques you used. In some cases, this may fit into the first paragraph as introductory material. The next paragraph should be the observations or measurements; primary data collection and so on. It is useful to keep the data separate from the background material and from the interpretation sections. The final paragraph ought to cover the interpretation of the results, conclusions, and some comment on the broader scientific implications of the findings (what it all means!). This paragraph structure will vary depending on the structure of the work. If the paper dwells at length on methodological issues, then the abstract might reflect that with a paragraph devoted to methodology. If the methodology in the paper is standard, then it could be absorbed quickly into the introductory paragraph. The abstract is often written last i.e., once the manuscript is completed.

4.3 The Introduction

The purpose of the introduction is to provide the reader with the purpose of the paper, a definition of the problem, the background of previous work including different approaches on the topic, precisely what the paper is trying to achieve and how this has been pursued (**DePoy & Gitlin, 1994**). More specifically, the Introduction is often divided in to:

(i) **Overall Aim of Paper:**
A clear statement of the aim should be given, as this will help the reviewers and the readers.

(ii) **Scientific Background and Justification:**
These should provide the reader with the details of the topic, i.e., if the aim was to make a geological identification of a structure in Trinidad, something about the geology and geological structures in Trinidad will need to be explained.
This section provides an opportunity to demonstrate to the reviewers, the author's expertise in the field and the familiarity with a broad range of relevant material, as well as the chance to set the specific research into its wider academic/professional context. From the background material should emerge the reason for the research; in other words, the justification. Therefore, an 'unknown' or an 'unclear' element should arise from the background discussion. One might argue that the extent of the geological structure remains unknown, for example, or that there is controversy about oil or gas production. This 'unknown' leads directly and conveniently to the next stages of the argument. If something is unknown, or unclear, finding it out or clarifying seems like a sensible objective.

(iii) **Specific Objective of the Research:**
When writing the 'Overall Aims' section, it is necessary to assume that the readers were not necessarily familiar with the research topic, and consequently much of the specific detail is left out. Placing the 'Specific Objectives' after the 'Background' is recommended, as this will provide the readers with some knowledge of the subject; the knowledge that was provided by the author(s)! This section therefore aims to explain in specific terms, with reference to the issues identified in the previous section, exactly what this research is trying to achieve. Sometimes, it is good practice to write a section on the "Scope of the Work" as this will define the boundaries of the research and research answers. It is not expected that a research paper on a particular subject can necessarily touch on all facets of the subject.

4.4 The Literature Review

This section provides information on the work done on the topic by previous researchers. It is logical to assume that the research would have been devised after consideration of the previous literature. The aim of the work should be to build on the body of knowledge that already exists (**DePoy & Gitlin, 1994**). It is necessary, therefore, to explain this existing knowledge and to mention the work that has led to it.

Some Journals may ask for both a literature review and a separate scientific background, the difference between the two should be that the scientific background provides the broad context of the work, whereas the literature review focuses specifically on previously published work and on previous literature that is directly related to the paper. This might be work that has attempted exactly the same goals as the paper or has worked in the same field area, or used the same techniques. If the aim of the scientific background was to give the readers enough information to be able to understand the *overall aims*, then the aim of the literature review is to give the readers the information they need to see both the *overall aims* and the *specific objectives* in a detailed scientific context.

4.5 The Methodology

The methodology section needs to explain the procedures followed in carrying out the research. This explanation should be sufficiently clear and comprehensive that if other researchers wished to repeat the research in the future, they could use the methodology section as an instruction manual as to how to proceed. The methodology section also assists to persuade the reviewers that the author understood what he/she was doing and that he/she had knowledge of how to perform it correctly. Readers will also judge the results and conclusions based on the quality of the methodology. If an unsuitable method was used, then the results will be less useful than if an appropriate method was used. The methodology section is commonly expected to cover the following issues:

i) **Scientific Approach**
This should explain the philosophical basis and the procedural requirements of the adopted approach. For example: Is the study quantitative or qualitative? Does it adopt a hypothesis-testing approach? What types of information are required to fulfill the project's aims and objectives? What are the characteristics of the research design?

ii) **Data Collection Methods**
These should explain the precise details of data collection procedures, including the measures taken to overcome problems that were encountered. Depending on whether the study involves field, laboratory or library research, this might require detailed description of experimental equipment, of field survey or sampling procedures, or of questionnaire design and implementation.

iii) **Data Analysis Methods**
These should explain the reasons for selecting particular analytical techniques, the nature of the techniques chosen, the practical effectiveness of the techniques and any problems experienced in their application to the project. It is especially important to describe any modifications made to standard procedures and why these were necessary.

iv) It is often expected that the researchers also report on and justify the selection of the statistical methods used for analysing and interpreting the results.

4.6 The Results

This section reports the data that were collected by means of the procedures previously described in the methodology section. This section must be separate from the previous sections. It is conventional practice for the data to stand alone in a section of their own. Future readers of the research can then distinguish easily between what actually happened in the field or in the laboratory and what the author(s) thought it meant. If the methodology was faithfully recorded and was satisfactory, future researchers might trust the observations even if they are not interested in your interpretation. If the results are clearly presented, the reader should be able to assess them and evaluate the conclusions drawn from them. The reader might choose to reach a different conclusion from the same results. Results can be presented in a variety of ways, depending on the nature of the study and the methodology used. Using the tabular or graphical form of presentation is the most common. A good way of getting ideas about how to present data is to study and examine published work that uses similar types of data.

4.7 The Discussion

The discussion section will need to bridge the logical gap between the observations and the conclusions. In this section, the author(s) need to explain clearly

how the observations and/or measurements made can relate to the aims, background and scientific structure of the paper. The results section presents the outcomes, whilst this section will need to explain the reasons of the outcomes. The author(s) will also have to include and explain any conditions, limitations, as well as the level of confidence statements, in order to moderate the conclusions. The discussion needs to be separate from the results so that readers can distinguish between the 'objective' element of the measurements and observations and the more 'subjective' element of what the author(s) believe about those observations. A future researcher scouring the literature for data about the topic could probably be interested in the observations and not the interpretation. The discussion section may touch upon the implications of the findings of the paper on professional/industrial practice, so as to give more purpose to its findings.

4.8 The Conclusion Section

The conclusion is the final stage of the logical argument that the paper presents. The conclusion is expected to bring the main outcomes of the paper into a sharp focus. After the abstract, conclusion is the most read section of the paper. Therefore, the findings should be clear, concise and easy for the reader to extract.

A conclusion, unlike a summary, which concentrates heavily on the results, not only reviews the results but also interprets them. Therefore, when conclusion contains insignificant information, it will give readers a negative impression. To make a manuscript more convincing, some negative aspects may be included in the discussion. Furthermore, developmental papers will also need to identify future direction and possible applications.

The conclusion needs to list the principal findings of your research. These can be divided into the points that answer the specific questions that the paper was investigating, some methodological or other findings that arose as a by-product of the principal line of research. In addition, there may be issues concerning the nature of the research and some ideas and recommendations concerning future research.

4.9. References

The purpose of this section is to provide full details of all the published material that the author(s) have mentioned in the paper. A reference list is not the same as a bibliography. A bibliography is a list of publications that are relevant to your subject. A reference list contains only those items specifically 'referred to' and cited in the text. The proper use of references helps to define the novelty of technical developments. Some of the description part of the paper can be reduced significantly with proper citation of the references. The idea of the list is that if a reader wishes to go to the library and find a copy of something mentioned in the report, the list should provide all the necessary publication details. The reference list is therefore a reader-service and an essential follow-up to the text. Consequently, the author(s) should communicate a substantial amount of information about the author, year, title, journal, pages and so on. The style of citation presentation of references depends on the targeted journal and is usually described for authors.

4.10 Acknowledgements

Authors may include a section on "Acknowledgements". This can refer to any grants used to support the research, any special technical assistance, etc.

5. Illustrations

Illustrations should be legible/clear, otherwise these give negative impact on the manuscript. The most powerful way to attract viewers is to break the monotony of the text and provide illustrations that effectively bring out the meaning of the manuscript in a lucid manner (**Singh and Nitin, 2001**).

5.1 Figures

A strategic choice of Figures/Illustrations, such as charts, diagrams, drawings and photographs for the paper will greatly strengthen it. The use of colour can only be justified when a Figure has more that six or eight categories. Some journals will not accept colour. The acceptable number of Figures depends on the targeted journal. However, it should not exceed five or six. The captions should provide the overall information. It is preferable to place the Figures just after its first citation in the text on the same page if possible, otherwise on the next page. In no case, should it be placed on earlier pages. Some journals may ask for the Figures to be provided on a separate page for their editorial reasons.

5.2 Tables

Tables are used to avoid duplication and provide substantial information such as key statistics in a compact, easy to follow and meaningful form. Placing the Tables within the text is dependent on the targeted journal. Some journals ask for providing the Tables on a separate page for their editorial reasons. If it is not mentioned as such, Tables should be placed near where it is mentioned in the text. The acceptable number of Tables depends on the targeted journal, however, it should not exceed five or six.

6. The Editing Process

Once the first draft is written, the writing-up process becomes in part a process of rewriting what you have already written. Redrafting is a normal event as it enhances the sharpness of a paper. It does not mean that your original draft is useless, merely that the writing process takes place over a period of time, during which the author(s) will make every effort to make the paper as effective as possible. It is good practice to make notes on earlier drafts and keep the drafts for reference at later dates. Editing is necessary in order to:

- Bring in new material, ideas and thinking;
- Reduce the length of the manuscript;
- Revise old sections to refer to newly drafted material;
- Change the structure, remove any repetitions and duplications;
- Check for completeness and accuracy of data;
- Clarity of basic concept and argument development;
- Adequacy of the approach and solution;
- Analysis of the results

It is difficult to analyse one's own manuscript for technical contents. The best way is to stay away from it for a few days and then to have a fresh look. Give colleagues a chance to review it. Before submitting the paper, the author(s) must revisit the *guidelines for preparation of the manuscript* by the targeted journal and edit the paper to comply with these instructions. It also recommended to ask a non-specialist and detached person to proof-read and to comment on the paper.

7. The Reviewing Process

As indicated in Section 2, most of the papers (except invited papers) are peer-reviewed, often by three reviewers, before being published. This process normally takes between three and six months but can take much longer, particularly if major corrections to the paper are required. Reviewers are provided with guidelines and asked to review the paper based on aspects such as:

- *Relevancy of the paper:* Is the subject matter suitable for the journal? Is the paper suitable for publication in its present form?
- *Originality:* The originality of the paper rated on a scale of 1 to 5.
- *Presentation:* Does the paper tell a cohesive story? Is a tightly, reasoned argument evident throughout the paper? Where does the paper wander from this argument? Do the title, abstract, key words, introduction, and conclusions accurately and consistently reflect the major point(s) of the paper? Is the writing concise, easy to follow, interesting?
- *Methods:* Are they appropriate? Current? Described clearly enough so that the work could be repeated by someone else?
- *Statistical design and analyses:* Are they appropriate and correct? Can the reader readily discern which measurements or observations are independent of which other measurements or observations? Are replicates correctly identified? Are significance statements justified?

- *Errors:* Are there any errors in technique, fact, calculation, interpretation, or style?
- *Length:* What portions of the paper should be expanded? Condensed? Combined? Deleted? (Specifically) Is the division between the main article and the appendices appropriate?
- *Data presentation:* When results are stated in the text of the paper, can you easily verify them by examining Tables and Figures? Are any of the results counter-intuitive? Are all Tables and Figures clearly labelled? Well planned? Too complex? Necessary?
- *Language:* Is the English satisfactory?
- *Abstract:* Is the abstract informative?
- *Conclusions:* Are the conclusions sound and justified?
- *References:* Are the references adequate, correct and have been cited in the text?
- *Overlap:* Does this paper report data or conclusions already published or in press?
- Comments to editor.
- Comments to authors, general comments on the topic, structure, organisation and specific comments on technical issues, applicability and suggestions to improve the paper.

Based on the reviewer's opinions, a large number of papers are often rejected. However, this does not mean necessarily that the quality of research is poor. In fact, the rejection rate could be directly linked to the demand for publication in a particular journal.

8. Fairness and Objectivity

If the research reported in a paper is flawed, criticism is usually directed at the science, not the scientist. Therefore, the reviewers will attempt to convince the author that:

- The entire paper has been read, examined and evaluated carefully.
- Criticisms are objective and correct, not merely differences of opinion and are intended to help the author(s) to improve the paper.
- He/she is qualified to offer an expert opinion about the research reported in this paper.

Reviewers are well-established authorities in their field. They believe in academic service and therefore they are volunteering their time and expertise to assist other with their publications. Consequently, reviewers often aim to win the author's respect and appreciation for an informed and concise review of the manuscript.

9. Responding to Reviewers' Comments

Reviewer's comments can significantly strengthen the paper. The reviewers will have experience in highlighting the weaknesses of a paper and advising on how to improve it. Therefore, the author(s) are expected to adhere to their comments and advice. However, if the author(s) dismiss the suggestions entirely, the paper may not appear in the journal but even if it did, the readers may have a regretful impression about the author(s).

If revisions are requested, the author(s) will need to submit a revised manuscript to the journal within four months. A manuscript undergoing revision for longer than four months will often be considered a new submission.

Once a manuscript has been rejected, it will be eligible for further review only if a revision was invited, or if it has been rewritten so completely that it can legitimately be called a new manuscript. First-time author(s) need to be prepared for rejections and not to take it personally. Therefore, once a paper has been rejected, it is advisable to wait a few days then re-examine reviewer's comments carefully and dispationally, address them in an academic, scholarly manner, do whatever is necessary to bring the paper to the right level and submit it for publication in a comparable journal to the first one.

10. The Last Hurdle

The editor-in-chief is responsible for verifying that the relevant corrections, recommendations and amendments proposed by the reviewers have been complied with and incorporated in the revised version. Once, he/she is satisfied that the manuscript is publishable, it is sent to the publisher. The publisher typesets the paper in the style of the journal and sends the proof to the corresponding author for verification. At this point, major revisions are not acceptable. In fact, most journals ask to return proofs within two days. Nevertheless, it is advisable to ask a detached person to examine the proofs for obvious minor mistakes. The majority of journals will offer the author(s) a number of free copies of the published paper. However, the author(s) will be asked to sign over the copyright of the published paper to the journal.

When the author(s) has published once, publishing the next paper should be easier due to familiarity with the publishing processes and being recognised as a published author(s).

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