Best practice guidelines

**WASP (Write a Scientific Paper): Preparing an abstract**

**ABSTRACT**

An abstract is typically prepared as a preface to a paper or as a submission to an event, such as a conference, so as to have research work presented as an oral presentation or as a poster. The principles are identical. Abstracts are always restricted by a word count, typically circa 250 words, so the maximum of economy is needed to convey result/s. The tenets to be borne in mind are therefore brevity, clarity, simplicity and parsimony. This paper provides some pointers and guidelines.

1. **Introduction**

   The keys to abstract creation are brevity, clarity, simplicity and parsimony. Brevity is implicit and inevitable as abstract submissions are nowadays universally online and abstracts beyond the stipulated length will be rejected or truncated. Summarise – because you can and you must. For example, Watson and Crick's landmark research states the paper's purpose in its title (Molecular structure of nucleic acids), resulting in a one page paper that can be succinctly summarised thus: the structure of DNA is a double-stranded helix. This paper garnered the authors a Nobel prize, and has been cited over two thousand times. If this can be summarised, anything can [1].

   An abstract may be a summary of a paper that is being submitted to a journal or an application for work in advanced stages or completed for presentation at a conference – the principles are the same.

2. **Ethics**

   An abstract must be scrupulously honest and refrain from unfounded claims or deliberate and/or unwarranted bias that may attempt to sway a scientific committee or editor toward acceptance. Enthusiasm must be totally justified and always curbed - unjustified speculations at this point are detrimental as they may be identified and the abstract rejected, or undetected and worse, detected at eventual presentation to an audience of peers.

3. **First impressions**

   An abstract is the first thing a journal editor or a conference scientific committee sees. These may reject outright if inappropriate or poorly written/designed, or send out for review. In the latter instance, a title and abstract are the only parts of the paper that a potential referee sees when invited to review a manuscript for a journal via an email.

   The purpose of an abstract and a title are to encourage readers to read the rest of the paper, or in the case of a potential conference submission, to have a paper accepted for presentation. Creators of abstracts should remember that research is governed by an equilibrium of a tripod of forces: authors are keen to publish while readers are overwhelmed and must perforce strictly censor that which they allow themselves to read, simply due to time constraints. The third factor in the tripod is the journal editor, whose main scope is to increase a journal's impact factor by enhancing the quality of the papers accepted for publication.

   Readers, faced with information overload, mostly just glance at titles of papers. If interesting, they may glance at sections of the abstract, such as the conclusion. If still found interesting, all of the abstract may be read. If still found interesting at this juncture, some readers may actually read sections of a paper, typically the discussion. A very few will read an entire paper. While this view may seem cynical, it is nonetheless, true. Indeed, this approach is actively advocated, as per:

   \[\text{The reader should begin by reading the title, abstract and conclusions first. If a decision is made to read the entire article, the key elements of the article can be perused in a systematic manner effectively and efficiently. A cogent and organized method is presented to read articles published in scientific journals [2].}\]

   Abstracts are therefore important as they gain an author exposure, and a presentation during a conference may lead to discussion during question time or during coffee, conference lunches and course dinners. New ideas may also be generated and free advice may be given as to how one may improve one's work or occasionally even ideas for new papers and collaborative work. This sort of networking during conferences makes an eventual paper acceptance likelier, and this is the author's ultimate aim.
4. Where

In the case of an abstract for a submitted manuscript to a journal, another paper in the WASP (Write a Scientific Paper) series will deal with which journals to target and why. In the case of an abstract for a conference, an appropriate event must be chosen. A small regional event is the ideal and non-threatening way for a novice to start. An abstract may also be presented at the annual meeting of the Maltese Cardiac Society which has a somewhat select audience, and also at the triennial Malta Medical School Conference if the latter happens to be temporally favourably scheduled. If truly important, the findings might also be submitted and presented at an international cardiology meeting such as the meeting of the European Society of Cardiology.

Once submitted to a conference, the abstract may be rejected, or accepted as an oral presentation or as a poster. Two papers in this WASP (Write a Scientific Paper) Best Practice Guidelines deal with the former [3] and with the latter [4].

5. Structure

The true aim of an abstract is to have a paper accepted for publication or a presentation accepted at a conference. The abstract is therefore a hook, a sales pitch, and should briefly include what is known about the subject and what the research in question adds. It should not even attempt to explain a subject — this is patently impossible due to (typically 250) word count limitations. An abstract must therefore be attractive in newspaper style [5] while adhering to the IMRAD (Introduction, Methods, Results, Discussion) format pioneered by Louis Pasteur in 1876 [6]. Significant limitations should be included in the discussion section as honesty is appreciated by reviewers.

The introduction is a background and is commonly the shortest section: what is known, what is not known and hence the justification for the study (and hence the abstract). This segues into the methods section which should summarise basic information such as data origin/ sample size, groups used and duration and time period of study.

The results are the most important part section and constitute further justification for the abstract’s existence. P values should be quoted herein. The discussion is the primary take-home message and should give some perspective as to the work’s importance. Citations and references are inappropriate and in the case of a paper, anything in the abstract must also be in the paper.

6. Formatting

Read the instructions for the abstract creation carefully and follow them through. Abstract adjudicators are typically busy people and incorrect work easily leads to outright rejection or at best, a request to resubmit after adhering to instructions, an annoying waste of time for all.

7. Completeness

Completed work only should be submitted and authors should avoid excusing partial or unfinished work. Authors should simply not submit work that is not complete.

8. Deadlines

Abstracts submitted to a conference will typically have deadlines for submission months in advance so as to allow scientific committees to adjudicate appropriateness and quality, and assign accepted abstracts to oral presentations or posters, with the latter conventionally having more cachet than the former. Abstract submission also typically requires registration for an event, and payment for conference registration.

9. Conclusion

An abstract is a hook for adjudicators to judge research work’s worth. Acceptance at a conference may result in free advice from peers or experts. It is crucial to remember (a mantra that this author reiterates again and again during WASP courses) that an abstract submitted and even presented at a conference that is not then written up as a paper is a pitiful waste. If research is not published, it is almost as if it has not done! Remember that formal paper publication is a vital part of one’s curriculum vitae.

Acknowledgments

The inspiration for this series of papers arises from the international Write a Scientific Paper course (WASP - http://www.ithams.com/wasp) [7,8].

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References


Victor Grech∗
Academic Department of Paediatrics, Mater Dei Hospital, Malta
E-mail address: victor.e.grech@gov.mt

∗ Department of Paediatrics, Mater Dei Hospital, Malta.