The abstract and title page

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Abstract: The title page and the abstract are essential parts of any research paper or manuscript; therefore, it is vital to write them correctly and well. Why? For one, it is what researchers will use to determine if the manuscript's content is relevant to their research for inclusion in their study. Two, online databases will use software to scan the abstract and the title page for specific keywords and ideas and use them for indexing. As a result, it is crucial to master the formatting and to understand the content which should be on a title page and inside the abstract to maximize the reach of a research paper. This chapter will delve into what is needed to write a proper title page and the abstract section, as well as providing general tips to keep in mind while drafting and writing.

Keywords: Academic writing; the title page; the abstract; writing tips; manuscript writing

Part 1: why care about writing an excellent abstract and title page?

The abstract section and the title page are an essential and core part of every research paper that gets published. Writing the abstract and title should be the very last thing an author should do; it is a grand summary of the entire article. The general purpose of the abstract and title is to provide other researchers with information about whether or not the results of the study are relevant to them. It also gives the readers a quick look at the paper to understand briefly what you have researched and what the scientific implications are in the field.

However, these days, there is not much manual searching performed when looking for relevant research. There now exist many online databases with millions of papers stored in them where researchers can type keywords into a search engine to find the related articles for whatever they are researching. Due to the practice of placing published research papers behind a soft or hard paywall, many of the database searching software programs will only be able to scan the abstract and titles of the article to determine if the document is relevant to the search keywords the user is using.

Due to the nature of the design of these search engines, an author can then "game the system" in that they can fill their paper's abstract with keywords and ideas that they think future researchers will be searching for to make their paper appear in these database searches more often, resulting in a higher citation rate (1).

Therefore, it is essential to write the abstract in a certain way to make sure that both the manual readers and artificial readers will be able to find it and determine if it is relevant to other people's research. Writing an abstract can, therefore, be an incredibly tricky task due to the limits and restrictions put in place, such as a word limit, formatting limits, and different styles for different publications.

To summarize, it is essential to write a powerful abstract for one core reason, citation rate. One, it is important for other researchers to be able to understand what the paper is about quickly and know what the scientific implications are for study inclusion. Two, it is important to write a good abstract and title page to increase the times it is found on online databases. The easier it is for people to find the paper, and the easier it is for researchers to determine relevancy, the more influential your paper will be in the scientific community.

Why do research paper titles matter? Before looking at the features of an excellent research paper title, let us look at an example that illustrates why a good research paper needs a strong title.

Imagine you are researching caffeine and work, and you are looking if any studies have shown that there is some correlation between caffeine intake and worker productivity. So, a keyword search is performed using the words, "caffeine", "productivity", and "work", and the database comes up with results with the following titles:

(I)   The benefits of drinking caffeine at work: a quantitative investigation.
(II)   Why coffee drinkers are happy workers.
(III) Caffeine gurus.
(IV)   Modern America: a quantitative report on how caffeine consumption directly impacts worker performance.

All four of these titles could be describing the same kind of study, or they could even all be the same study. As you can see, they all give different impressions about what the research will be.

❖ Title 1 describes the topic and the methods of the study, but it is not very catchy or memorable.
❖ Title 2 partly describes the subject, but it does not give any information about the methods used in the study. For all we know, it could be some opinion or even theoretical.
❖ Title 3 is somewhat catchier but gives us almost no information at all about the article.
❖ Title 4 is catchy and engaging, and it is followed by a subtitle that provides the reader with all the information about the content and methods of the study.

When researchers are searching online databases for studies, the title page is the first thing that the reader will see. First impressions matter, and it is what will introduce the reader to the topic. The title provides the reader the necessary information to judge if the paper is relevant to them before they even click into the study to read the abstract. A bad title might provide the reader with wrong information about the study before even clicking into it and reading more. It is important to focus on the title to make sure that the future readers get the right impression about what the research should be.

Part 2: items to include on a title page

The first item, besides the actual title of the paper, that a title page should contain are the authors and corresponding authors. Some journals publish each author's highest academic degree or degrees, while others do not. Confirming this information is something that must be done with whichever institution you are writing for, beforehand. Additionally, the author's department name and/or the institutions to which the work should be attributed to should be added to the title page.

Lastly, contact information for the corresponding authors should be added. The name, mailing address, telephone, and email address of the authors responsible for all of the correspondence for the manuscript should be added to the title page.

The title of the paper and the authors who wrote it are the two most required items for a title page. However, depending on the institution that you are writing for, there might be some additional information that needs to be added to the paper; this is something that must be confirmed with beforehand (2). For example, some of these other items could include the following:

(I)   A running head: some journals may request a short running head or a footline that is usually no more than 30–40 characters in length at the foot of the title page. Running heads are published in most journals but sometimes used within editorial teams for filing and locating purposes.
(II)   Word count: a word count for the text only (excludes abstract, references, figure legends, acknowledgments, etc.).
(III) The number of figures and tables. This is primarily for the editorial team to help organize and confirm how many charts and tables should be included in a published version.

A good formula for easily constructing a title for a research paper that was created by Enago academy is as follows (3):

(Result): A (method) study of (topic) among (sample).

For example:

Coffee makes workers perform better: a qualitative study of coffee consumption among American workers.

Rhetoric scholars Hairston and Kenene have found that making a good title involves meeting four specific goals (4):

(I)   The title should allow the reader to predict the content of the research paper.
(II)   The title should engage the reader, and it should be memorable.
(III) The title should reflect the tone of the article and the tone of the writing.
(IV)   The title should contain the essential keywords needed for making it easier to be located during online keyword searching.

The title should be a maximum of 15 words; however,

each institution and field has different title standards. Following this formula can be helpful to meet this kind of criteria.

To continue, a good thing to keep in mind when writing a title is to make sure that the title fits all four of these rules:

(I)   Make sure the title describes the topic.
(II)   Make sure the title describes the methods used.
(III)   Make sure it tells the reader what the sample was.
(IV)   Make sure the title says the results of the study.

To summarize, the title page should have at least two essential pieces of information. It should first contain the full title of the paper, and it should also include the names of the authors with their relevant contact information. Please see a chart below of a sample of a possible title page:

Here is an example of a title page format:

TITLE: The official, full title of the paper.

AUTHORS: The names of all the authors who wrote the paper should go here. For example, "John Doe, Mary Ann, and Jane Smith".

AUTHOR AFFILIATIONS: The university or department that this is associated with should go here. For example, "The Department of Surgery at the Maryland Hospital".

CORRESPONDING AUTHOR: Write all the information that one needs to contact the author of the work. Phone number, email, address, name, etc. For example, "John Smith, Johnsmith@email.com, 555-555-5555, 123 Mayo Clinic Drive, United States, 555555.

RUNNING HEAD: The running head name that is given to the paper, "i.e. analysis on caffeine on productivity".

ARTICLE TYPE: What kind of article this is, i.e. an original article.

AUTHOR CONTRIBUTIONS: Write what each other did to contribute to the work. For example, "John Doe designed this study. Mary Ann drafted the tables. Jane Smith performed the analysis".

FIGURES: Write how many figures, tables, videos, pieces of media that the paper contains. For example, "3 figures, and 2 tables".

REMARKS: Any additional information that the reader should know. For example, "This paper was designed for the Harvard Medical Conference 2018".

CONFLICTS OF INTEREST: Declare any information about any conflicts of interest the reader should know about. For example, "This study was sponsored by General Mills".

WORD COUNT: Number of words in the paper. For example, "10,000 words".

Part 3: what to include in an abstract?

The abstract always follows the title page; however, requirements for the formatting and length vary. In general, it should provide all the information necessary to give the readers a context or background for the study. The abstract should also provide the user with the knowledge to help understand the researcher's motivations for conducting the study in the first place. They should be able to read the abstract and understand why you researched this topic, and why people should care about your results.

The abstract should also clearly state the problem and the purpose of the study. For example, it should discuss the issue or issues that were solved by the study, and it should explain how you will go about solving these problems. It should clearly describe the entire methodology that is used to solve these problems.

Lastly, the abstract should contain the implications of the study. It should accurately depict what the results mean for the scientific community, and what kind of impacts these results will have on future research. If the analysis is already completed, the results could be included. This is something that would be up to the author's choice.

There are two formatting choices that one can choose when writing an abstract. The first choice is an abstract that is formatted as a single paragraph with block formatting and no indentations. The second choice is an abstract that is divided into four parts: the background, methods, results, and conclusion.

Typically, an abstract is limited to 200–300 words, therefore being able to condense all this essential information into such a short paragraph can be very challenging, especially for non-native English speaking doctors. Being short and concise is critical. The most important thing to consider when writing an abstract is making sure that the abstract introduces your research topic and that the words contained inside it will help it be locatable in database searches. Additionally, the title page and the page that the abstract are on should not be numbered.

How do you know if you have enough information in your abstract? A good rule to follow is to put yourself in the shoes of another researcher looking into the topic you are also researching. Ask yourself: if this abstract was the only part of the paper I could access, would I be happy with the amount of information presented there? Does this abstract portray all the information that I want the reader to know from my study? If the answer is "no" then the abstract likely needs to be revised.

It is also essential to make sure that the correct writing

Robotic lobectomy for lung cancer: initial experience of a single institution in Korea

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Background: Robotic surgery is known to have several advantages including magnified three-dimensional vision and angulation of the surgical instruments. To evaluate the feasibility and efficiency of robotic lobectomy in the treatment of lung cancer, we analyzed the outcomes of our initial experiences with robotic lobectomy at a single institution in Korea.

Methods: Eighty-seven patients with lung cancer underwent robotic lobectomy (robotic group: 34 patients) and video-assisted thoracic surgery (VATS) lobectomy (VATS group: 53 patients) between 2011 and 2016 at our hospital. The medical records of these patients were retrospectively analyzed.

Results: The operation times of the two groups were significantly different (robotic group, 293±74 min; VATS group, 201±62 min; P<0.01). Intraoperative blood loss occurred more in the robotic group than in the VATS group (robotic group, 403±197 mL; VATS group, 298±188 mL; P=0.018). The numbers of lymph nodes dissected in the two groups were significantly different (robotic group, 22±12; VATS group, 14±7; P<0.01). There was no intraoperative mortality in both groups.

Conclusions: Despite the initial difficulties, robotic lobectomy for lung cancer was a safe and feasible procedure with no operative mortality. If operation time and intraoperative blood loss improve as the learning curve progresses, robotic surgery may overcome the limitations of VATS in lung cancer surgery.

Keywords: Lung cancer; lobectomy; robotic surgery; minimally invasive surgery (MIS)

Figure 1 An example of a published abstract (5).

style is used when writing the abstract. Consider using the active voice whenever it is possible. However, this might be difficult though, because much of the abstract would require passive voice sentence constructions. Make sure that the abstract contains concise and complete sentences. Get to the point as quickly as possible and always use the past tense. Past tense should be used because this is reporting on a study that has already been completed.

To conclude, in general, writing an abstract is very difficult. The content that is contained inside of it can be very different depending on the research topic, field, institution, etc. The best advice that can be provided in writing an abstract is to look at what other researchers are publishing in the field. Online databases are very powerful, and there are millions of examples of abstracts that can be used as a reference. Use online databases like PubMed and search for topics similar to the one you are researching. Mostly every paper on PubMed provides the abstract section for free; therefore, it is possible to model your abstract after other people's research in your field to avoid mistakes in your own.

Figure 1 of this document contains an example of a published abstract that can be used as a guideline for your own writing.

Part 4: the types of abstracts

Before beginning the writing process for the abstract, it is important first to determine what kind of abstract should

be included for the paper. There are four general types of abstracts (6).

The highlight abstract

A highlight abstract is explicitly written to attract the reader's attention to the study. In this abstract, no pretenses are being made of it being either a balanced or complete picture of the paper. A highlight abstract sometimes omits essential information about the study as a method to spark the reader's interest in the writing. The highlight abstract cannot stand independent of the article that it is associated with. It is not an abstract in the technical sense, so, it is rarely used in academic writing.

Informative abstract

Most abstracts written in academic writing are considered to be informative abstracts. They do not critique or evaluate work; they merely describe it. An excellent informative abstract is one that enhances the work itself. That is, the researcher presents and explains the main arguments, results, and evidence in the paper within this abstract. It contains all the information that would generally be in other abstracts such as the purpose, methods, and scope, but it also includes the results and conclusions of the paper and the recommendations of the author. Usually, this abstract is no more than 300 words, but it depends on the discipline and institution.

Descriptive abstract

A descriptive abstract is a type of abstract that reveals the kind of information that is found in the published work. This abstract makes no judgments about the work done in the paper, nor does it provide any results or conclusions from the research. It does, however, incorporate the keywords that are needed from the text. It may also include information about the purpose, methods, and scope of the research. A descriptive abstract can be considered as an outline of the work, rather than a summary, in that it primarily only describes the work being summarized. As a result, a descriptive abstract is very short in length and is generally 100 words or less.

Critical abstract

In addition to describing the studies main findings and the information in the study, a critical abstract provides some

judgment or comment about the study's validity, reliability, or completeness. In a paper with a critical abstract, the researcher will be evaluating the document and comparing it with other works on the same subject. Critical abstracts are the most extended type of abstract, due to their interpretive commentary, and can be around 400–500 words. In academic writing, this abstract is rarely seen.

To summarize, no matter what kind of abstract is used, the abstract allows the author to elaborate upon each significant aspect of the paper and helps readers decide whether they want to read the rest of the author's writing. Therefore, there needs to be enough key information included to make the abstract useful to someone who may wish to examine the work.

Part 5: items that do not belong in on the title page or abstract section

Although every institution has its formatting and style, there are still mandatory parts of a title page and abstract that almost every institution will require. The same applies to the opposite, and there are some items that should not go on a title page or an abstract section. Here are some items that the abstract or title page should not contain (4):

- ❖ Acknowledgments to anyone.
- ❖ An executive summary, or any new summary other than the abstract itself.
- ❖ Graphs, charts, figures, tables, etc. or any references to them. The reader of the abstract should be able to see all the information they need without having to consult a chart.
- ❖ It should contain no references at all to any other work that is not written solely by the authors.
- ❖ Do not use ellipses, shorthand speak, or incomplete sentences.
- ❖ Do not use any technical jargon that may be confusing to the reader; someone who is not in the field should be able to read and understand the abstract.
- ❖ Do not use any acronyms or abbreviations at all unless they are defined first in the title or abstract.
- ❖ Do not be discursive with vocabulary; do not use unnecessary adverbs and adjectives.
- ❖ Do not write lengthy background or information that is contextual.

Part 6: tips for writing the abstract and title page

Although both the title page and the abstract are the first

sections of the paper, it is best that the abstract is written last. This is because the abstract is a summary of all the contents of the entire article. Therefore, it is an excellent strategy to write all the materials first and go back to writing the abstract and title page last. A suitable method that can be used is to take whole sentences and key phrases from each section of the finished paper and put them in a sequence that summarizes the contents. Next, then you should to revise them into sentences or add connecting phrases or words to make the writing flow clearly and smoothly.

The most crucial part of writing the abstract is to plan. Before any writing even starts, make sure that all the critical points from the paper are written down. Then, begin planning the abstract based on these vital points. If you have finished the first draft of the abstract, and you find that it is too long, it could be beneficial to give the draft to a colleague or someone who is not familiar with the article to go over it and highlight the ideas or phrases that they think are irrelevant. However, if you find that the abstract is too short, refer to the outline again and see if any essential words or phrases were left out.

An abstract and title should be understood by anyone, even those who are not in the field, so jargon should be avoided. To determine if the paper is understandable, it would be helpful to give it to someone else to read for feedback on the logic of your writing: ask them, "can you understand this?"

In conclusion, writing an abstract and title page is very difficult. Also, it is the most important part of any published academic work. There are many critical aspects in the title page and abstract writing formulas that must be considered when writing. Therefore, it could be of great help to keep in mind the points and helpful ideas brought forth in this chapter to aid in the writing process, allowing for a much simpler time, and having more successful results in the research community.

Acknowledgments

Footnote

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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