

**Introduction to Professional Scientific Communication**  
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**Lecture - 09**  
**Title for a Research Paper**

Welcome to the week 3 lectures for this course. So, in the previous week we have looked into how do you write abstract? So, now, we are going to look into many other aspects of the research report or research paper. And then take some of very important you know discuss some of the important guidelines as to how effectively you can write manuscripts or research articles or research report. So, that is pretty much the focus of this particular course.

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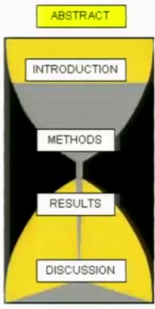
So, I am what I am showing you is a screen shot of a typical research paper, you can see on the left side of the screen then it has a title it lists all the authors who contributed to the work who also wrote the paper and then their affiliation has to from which institution which country the authors are from and where the work was done, followed by what is called as an abstract, which gives you the summary of their findings. And then the paper is detailed with many other thing like for example, the background what you call the introduction, methods, results and discussion references and so on.

So, this is a typical research paper and these are all published in what is called as journals, the journal has a name and it has several issues probably in a year and they have every issue may have 12 13 research article. So, they have their own way of publishing and in which also allows the publisher to catalogue all the papers and you are able to search and find. So, how do you really do that? That is exactly the topic that we are going to discuss today.

So, this is the basic layout I have already shared with you, that is that in any typical report whether such subheadings are not there or there regardless of it you have these elements, that is you have a summary of the finding which is called as abstract followed by introduction introducing the topic defining the hypothesis and also what are your objectives exactly what is the question that you are asking, and how do you address this question what we call as methods and what did you find that is result or observations and finally, extrapolate as to what are your findings and how they possibly may help you and others to understand the topic of research in in much better light.

So, that is precisely what we have said in in when you write an abstract, though it is you know a short paragraph of normally turned it with 300 words often not having subheadings there are abstracts of course, that has subheadings we will see little, but even if there are no subheadings in every single paragraph.

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<p>Many plants in Australia have their seeds buried in order for the species to survive fires. The seeds start to germinate under the soil at certain temperatures. <b>Seeds of Acacia terminalis and Dillwynia floribunda were examined in this experiment. It was hypothesised that the seeds need heat for the germination to start.</b> Seeds of the two species were treated in hot and cold water and left to start germinating. <b>Acacia terminalis showed a significant response in germination after the hot water treatment while Dillwynia floribunda did not.</b> Neither seed showed a response in germination after cold water treatment. <b>The results for Dillwynia floribunda were unexpected but may be explained by factors such as water temperature and the length of time the seeds remained in the heated water.</b></p>	<p>Background Information  Outline of what was investigated in this experiment  Hypothesis  Summary of Method  Summary of Results  Summary of Discussion</p>	
<p><b>Write an abstract only after you have completed writing rest of your research paper!</b></p>		

You pretty much give you the background and outline as to what is your hypothesis and what questions you are asked that is what constitute and introduction, and then they give you the methods the approaches you are taken and summary of results and then summary of discussion, which constitute what is called an abstract.

The important element is that you should always write an abstract only after you have completed the manuscript by writing your entire report entire paper because this is an you know is a kind of a executive summary of what you have found, and what you were discussed and what are the significance of your finding.

So, you can highlight that only if you have done with your entire you know report or manuscript. So, it is often said that he should you know write an abstract at the end of writing your entire manuscript you know that helps because that is how you are able to tell exactly what you want to say.

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The question is who reads your paper alright you prepare a report you submit to a journal you know they accept it is published the movies. So, that is important element that you need to know because whatever you are writing is not because simply want some bookkeeping, but you really want people in your research area to read, appreciate, understand then follow up your observations and work. And that is very important because communication is nothing, but you know you are saying conveying what you are

done what are the significance to the scientific audience, we would again appreciate your work and take a further.

One of the ways by which you know your paper or your scientific article may get the attention of the reader is that many other readers go through what is called a journals there are journals these are research journals which publishes, the such papers either in a diverse area or restricted the area for example, what I am putting here in the screen is a the journal that is in nature, these are multidisciplinary journals basically they publish almost any area of science engineering management education and so on and what they do is they look at you know discoveries or inventions that are that have wider audience and appreciation.

Therefore, they take up based on the merit of the paper and discovery they may accept in published. Likewise there are journal that are the specialized field for example, in my own area you know human molecular genetics see one journal American journal, American genetic.

American journal of human genetics you can go on listing you know depending on what kind of area you work on biochemistry, then you have journal of biological chemistry. So, there are a number of journals that are there in a given area. So, if you know when even a researcher; when you start reading about this research topic you consult in a set of journals, and that are the relevant area. So, what do you do is these journals publish issues every month or once in two months and so on.

So, as and when the journal new issue comes, it should be your habit that you go through what is called as table of content because that will list all the papers that are accepted and published in that given issue of the journal. So, like what is shown here on the left side, you know you have editorial which say safeguards for donors for example, people would donate.

The egg cells or sperm or you know stem cells and whatever it is and they are just told and what are their rights and ethical considerations is an editorial. Basically when you read the title you understand as to what that particular article is discussing about. So, you know in a issue if you have 20 research articles there are titles and the table are content pretty much some you know gives you know the title of the manuscript, the authors and the page number which you know help you to you know go through all of them and then

choose the article that you would like to read, because it depends on what are your interest or whether that particular title as created any interest in you.

So, this is one of the ways by which people may read your article once that is published. If you look into readership in a journal any journal, the abstract is read by less than twenty percent of the reader's say I got a new issue of a journal. So, I look at the table of content and an average if you look at any abstract of any other paper that is listed in the journal, if it less than 20 percent of the journal you know readers may read.

This is if is a specialized journal in a given field for example, journal of biological chemistry or human molecular genetics and so on. But if it is like a multi discipline journal like nature which publishes right from policy to science engineering management and so on in the readership goes down further because then.

You have wide variety of audience and again there are types of article that may attract more readership for example, commentaries news and views what they call. So, news and views is nothing, but a small article which highlights the findings of a landmark paper that is published in that particular issue of the journal so, but the news and views you know gives the writing which is sort of in anyone can understand right it is not for the technical person it is not for the person who is exactly from the field.

So, it is written in a different way. So, such kind of articles have higher readership as compared to the hardcore scientific research article. So, you know you can see now even if you go for speciality journals the readership.

For a given you know this probability gets is that your table that is published in a speciality journal, the abstract will be read the about 20 percent and then if you see the entire paper you know the readership we looked at it will be less than 5 percent right. So, that sort of tells you that it is not that every article that is published in the given issue of a journal, is read by all the readers.

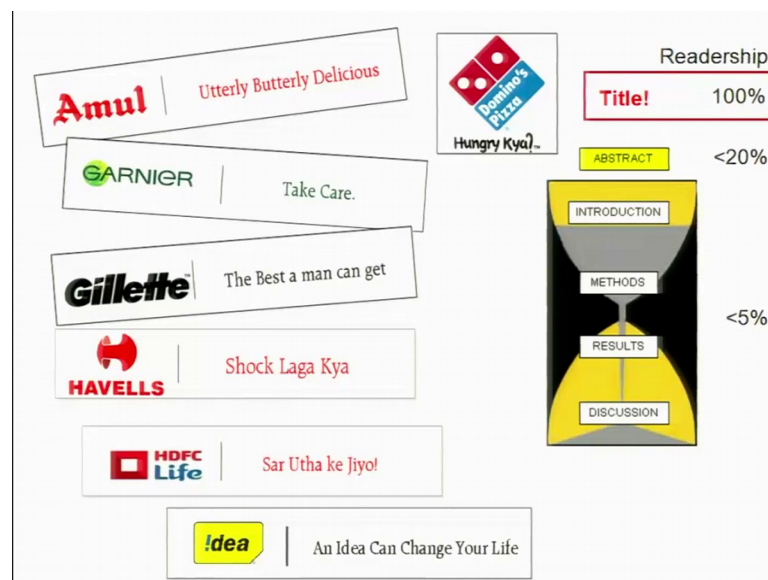
Obviously, you know they would look for papers that are published in a given area, the area that all they are working in therefore, they would like to read they may read an abstract because you know they have want to know exactly what is the outcome of your study. So, they will read the abstracts they will understand and in sort of appreciate, but

if they really want the detail then only they will go to the full length introduction methods results and discussion.

So, there for the readership further goes down. The question is then which section of your paper is read by say all the readers of a given issue of a given journal right it is 100 percent most often, that is what you callas title right. So, when you have a table of content, you basically look at all the titles to sort of sort those articles that you wish to read. So, the title you know typically if anybody looks at class to issue a new issue of a journal. The title would be something like one hundred percent readership because you know you take up the issue and read; because you want to know what are the articles that are published.

So; obviously, you would glance through all the titles and this title is attractive or title is you know something relevant to your field of research, then you go on read abstract and then if required you go further down. So, this is exactly these from the readership point of view, these are it is known that the title carry weightage. Therefore, it is you know extremely important than that you come up with in a very good title.

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What I am showing you in this screen is all those catchy slogans people often put for many of the advertisement that is for example, Amul the brand name does not make anything obvious as to what it is about right, but when you read the slogan for example, Utterly Butterly delicious then you sort of links that to it is about.

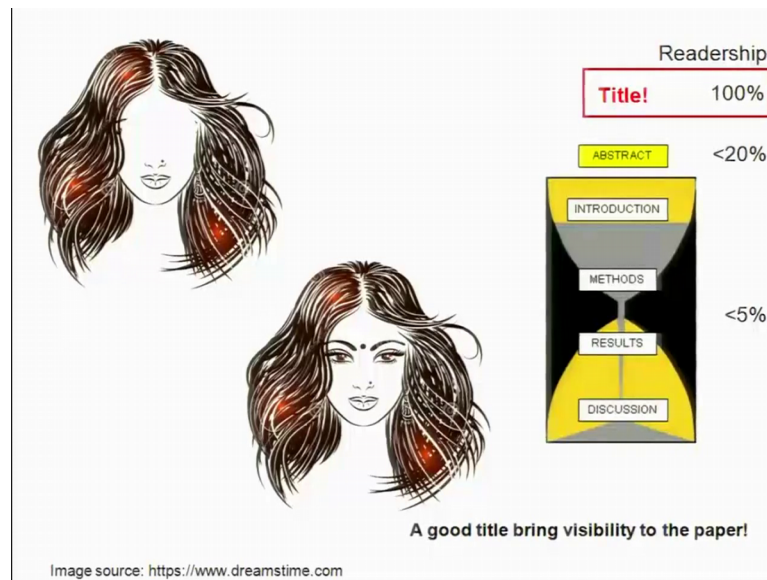
Something that you can eat and enjoy right and then for example, the catchy slogan for pizzas hungry [FL] I mean again you know you reach us if you feel hungry Garnier take care. So, it is something like a health product you know whether it could be you know skin lotion or it could be soap and things like that and then you again for Gillette's it says the best a man can get again you can say there is something to do with male. So, it is the razors and so on.

So, each one of these you know brands have set of products, that target a particular consumer segment and they make some catchy slogan often that are put in. So, it is like a title. So, basically when you read that it sort of you know makes you to think more about it read more about the product and then sort of identify that you know the title with the product and therefore, you remember and so on.

So, if the title is something like that you know the title is something that brings in a lot of importance to your manuscript even if you are done exceedingly very good in a work and you have written. So, well beautifully in your article and even if our abstract is good, but if the title is not as convincing as the abstract is then what would happen is people who end up reading your abstract you know would not will go down, because your title was not attractive it should be like you know the very catchy you know title more often you would find movies come up with certain titles and the titles themselves are you know.

A kind of very attractive slogans that which increases the readership of viewership in terms of for example, in movies. So, you have to give a lot more importance to the title when you know finally, arrive at the title. So, let us see how do you really do what is title.

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The title is something like as I told you brings in lot of visibility or journal visibility of work therefore, it is very very important like as important as the I the pair of eyes in a face if you do the eyes from the face or the cartoon, then you may not understand whether that person that you are planning to you know draw on that category whether he or she is angry sad awake you know things.

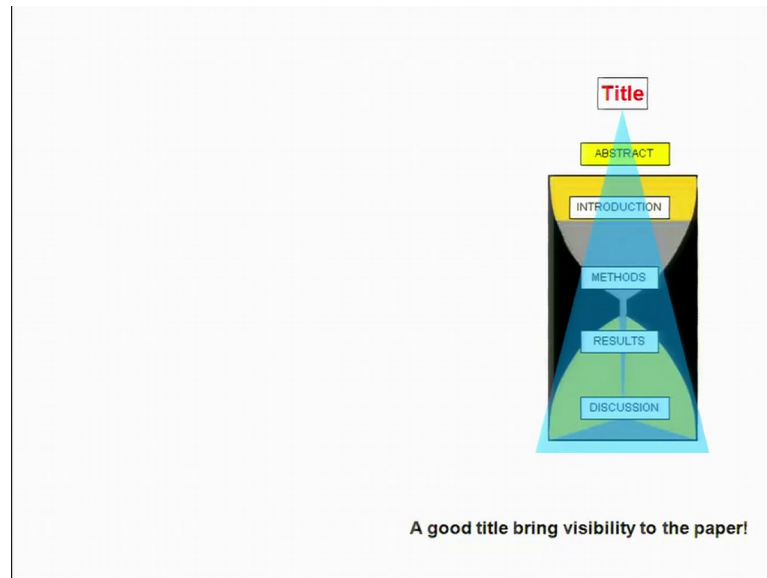
Like that by adding a pair of eyes and you are able to bring in life to that you know cartoon. So, this is something like that. So, title is as important because when you write a very good title then the reader is tempted to read now, the abstract because you know it conveys something.

So, beautifully as to what you are done therefore, you know they are compelled to read that short and if you have returned the abstraction of beautifully and justify why you know your work was. So, important then then they would end up reading the rest of the you know sections of the manuscript. So, it is a kind of a you know advertisement as well for your manuscript therefore, you should really give a lot of thoughts about how you write you know title.

Let us see yeah as I told you a good title being visibility to the paper because that is the only way you know people get introduced to your paper because it is published they look at the journal, they look at the title and then they read and understand what you have done..



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So, therefore, you would you know you should write title at the end of you know completing everything else in your manuscript, you will retain your introduction methods and those observations, discussions, then you will return the abstract for this manuscript and then you should come for a title.

Title something although I am discussing about the importance of the title in the beginning, the title is something that you should write at the end of you know your manuscript preparation, because it is something like a summary of your also executive summary that is abstract right. Therefore, it carries you know a lot of weightage. So, you should take time you should consult people and you should write.

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So, it is so, important that there are research papers that are published as to how you know you should arrive at title for example, what I am putting is has is a paper which says the title of the paper says is that formulating the right title for a research article. So, anything you scribble can be a title for the manuscript, but is it the right title.

So, that is that is the question that you should ask what is that right title, how do you come up with the title that is able to convey exactly and what you have done and bring out the novelty bring out the significance of your study. So, that is where it is extremely important that you learn how to write the title. So, a title is an important part of the article.

So, I am just reading out the abstract of this particular you know paper it condenses article content in a few words and captures readers attention there is exactly the point I told you the first meeting point for any reader with your article is the title, because that is where they are going to read because they will not end up spending too much time in the abstract if they are not interested in.

So, they will only read the title so; obviously, the title should be you know should convey everything that you want to say, but reactive should be very shot. A good title for a research article is one which on its own is able to introduce a research work to the fullest extent that in a concise manner. So, there is a challenge. So, you have do sort of some you know summarize your work, the significance the approach method outcome

and the significance everything in a few words probably 12, 13, 15 words that is the maximum and that you know is a kind of a one line writing scientific titles that are informative and attractive is a challenging task is extremely difficult.

We will see why it is difficult, this communication they are talking about this particular paper that is published here describes the importance of titles and the methods of creating appropriate titles for us as paper. So, on the top of it have given you the link it is a freely available paper, published from India in a journal that is probably from India, it will be very interesting to read I would really recommend you guys to go and download the paper and read.

So, I am going to discuss a few points and most of my discussion here after in the slide or all borrowed materials from the literature the reason I am borrowing and providing as many links rather than telling my own experience of my own guidelines is that you know often when you when you write a scientific research article or so. So often you find that there is a title there is a abstract there is a introduction, methods results discussion so on..

There is a common notion that when you are a beginner then everything is written in that particular order. In fact, that is not true, exactly I told you right now that you finish the manuscript then come for the abstract then come for the title. So, this is the reverse order with regard to writing as opposed to when you read. So, you know when you when someone tells you that these are we to write probably you will wonder; whether he or she is correct telling you.

The correct sequence; so, I am citing so many different sources and giving the links, because in a wealth of information available freely in the various forum with mostly on the internet; so, you may be able to access them and read and get diverse view and most of them you know sort of you know arrive at the same point that you know you should for a title you should do at the end, and what are the you know guidelines for that and how and when you write an abstract what is a method what is introduction and so on.

So, it gives you lot more you know points, that then that I could discuss in this course. So, what I am going to put through the rest of my course is that a collection of all these materials that are freely available, either in the form of research articles.

Like what I have shown you right now or some of the guidelines that are you know hosted by many universities across the world therefore, you know it also gives you an opportunity to read more than what is being discussed in the classroom right.

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JBSM Short Rep. 2010 Jun 30;1(1):2. doi: 10.1258/shorts.2009.100020

**The impact of article titles on citation hits: an analysis of general and specialist medical journals.**

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Ⓜ Author information

**Abstract**

**OBJECTIVES:** Most published articles are not cited and citation rates depend on many variables. We hypothesized that specific features of journal titles may be related to citation rates.

**DESIGN:** We reviewed the title characteristics of the 25 most cited articles and the 25 least cited articles published in 2005 in general and specialist medical journals including the Lancet, BMJ and Journal of Clinical Pathology. The title length and construction were correlated to the number of times the papers have been cited to May 2009.

**SETTING:** Retrospective review of a scientific database.

**PARTICIPANTS:** None.

**MAIN OUTCOME MEASURES:** Citation rate

**RESULTS:** The number of citations was positively correlated with the length of the title, the presence of a colon in the title and the presence of an acronym. Factors that predicted poor citation included reference to a specific country in the title

**CONCLUSIONS:** These data suggest that the construction of an article title has a significant impact on frequently the paper is cited. We hypothesize that this may be related to the way electronic searches of the literature are undertaken.

PMID 21103094 PNCID PMC2984326 DOI 10.1258/shorts.2009.100020

<https://www.ncbi.nlm.nih.gov/pubmed/21103094>

So, you know this is just to highlight why title is important, I am showing you another paper this paper and really did a research on you know the title that are there in the research article. You can see that the title is the impact of article titles on citation hits an analysis of general and specialist medical journals. So, when you talk about citation hits says that you know often there are various ways by which people measure, the significance of your work published in a given journal you know the significance of your work that you have returned as a paper and published in a given journal..

One the journal itself right the journal may have a stranding you know this is a very well reputed journal or you know very considered to be a old and the society journal. So, these are in the different ways by which people look at the journal, and any paper that is published in a given journal search should need certain you know standards therefore, by knowing that you have published a paper in a journal, even if I am not exactly what in your field, I can appreciate that you have done some you know really extraordinary work therefore, that I have been published in a given journal right. So, that is one of the ways.

Of looking at it, but there is also another way of looking at maybe you have not published your work in a you know in the journal that is ranked very high, published in

for example, a level that is mid level journal, but your work was so, good that there are so, many way followed whole methods or so, many used your data and so on or you developed a tool that you have you know for example, you have you have come up with database, that lists many of the for example, biological events or whatever it is on line tool or you have developed a method novel method for analyzing biomolecules to published it and then a large number of users across the globe, started referring to your you know journal paper and then started using it.

Therefore one can easy we have even look at what is called a citation, how many you know papers cited your paper because you know we will talk about little later, there is a important element in any communications called as the reference. So, any statement that you make in your research paper should be supported by the literature.

So, you cannot make a random statement, it should be supported by literature that is what called as references. So, if you have done something very good and people follow you a methodology or approach or results, then they are going to cite your paper. So, the citation index is one such you know dimension, one such kind of analysis that can tell how good your science was, and that is what people have done in this particular thing.

They looked at the title for example, how lengthy or what kind of combination of words that they use in title and then citation is how often that has been cited, because as I told you people would read your article only after seeing the title if the title is you know its not really conveying what you want to convey, then they are not going to read your article because they are not getting what exactly you are done..

So, here what they have done is you looked at all this you know medical journals and then did survey, it comes up quite good. So, the result you will see that the number of citations positively correlated to the link that the title, the presence of a colon whatever it is. So, what it says is the factors that predicted poor citation include the reference to a specific country in the title. So, there are various ways by which you can look into I will also show you another paper which again did a very similar kind of a research.

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Clinics (Sao Paulo) 2012;67(5):509-13

**Articles with short titles describing the results are cited more often.**

Paiva CE<sup>1</sup>, Lima JP, Paiva BS.

Author information

**Abstract**

**OBJECTIVE:** The aim of this study was to evaluate some features of article titles from open access journals and to assess the possible impact of these titles on predicting the number of article views and citations.

**METHODS:** Research articles (n = 423, published in October 2008) from all Public Library of Science (PLOS) journals and from 12 Biomed Central (BMC) journals were evaluated. Publication metrics (views and citations) were analyzed in December 2011. The titles were classified according to their contents, namely methods-describing titles and results-describing titles. The number of title characters, title typology, the use of a question mark, reference to a specific geographical region, and the use of a colon or a hyphen separating different ideas within a sentence were analyzed to identify predictors of views and citations. A logistic regression model was used to identify independent title characteristics that could predict citation rates.

**RESULTS:** Short-titled articles had higher viewing and citation rates than those with longer titles. Titles containing a question mark, containing a reference to a specific geographical region, and that used a colon or a hyphen were associated with a lower number of citations. Articles with results-describing titles were cited more often than those with methods-describing titles. After multivariate analysis, only a low number of characters and title typology remained as predictors of the number of citations.

**CONCLUSIONS:** Some features of article titles can help predict the number of article views and citation counts. Short titles presenting results or conclusions were independently associated with higher citation counts. The findings presented here could be used by authors, reviewers, and editors to maximize the impact of articles in the scientific community.

PMID 22666797 PMID 22666797

<https://www.ncbi.nlm.nih.gov/pubmed/22666797>

So, and this is very interesting this article says, article with sharp title describing the results are cited more often because you know you can go and look at. You also have to remember that this kind of analysis is based on in which area you are working in right for example, you work on medical field and there are say 100 different medical journals from India and then more often you are going to report you know cases about you know incidence of a disease or a treatment whatever that are pertinent to say Indian population..

So, when I want to really see what others have done with regard to treatment of a given disease in Indian population? So, I am going to give you know such to understand or identify papers that talk about that disease treatment and Indian population therefore, you will find that more such papers are getting you know cited because if there are more journals more papers coming from India that is one way of looking at it.


But if you look into more of a basic science kind of a research, and that is what this paper talks about here the articles with short title this you know describing since I have cited more often because then when we short title then how much time for example, am I really want to do a quick survey of a number of research articles that are published in a given area.

If the articles too lengthy then I lose interest right to read them because; I am compelled for the time. So, I will look at quickly the article, that I have a short title is they

understand what it is and then go and read more on that and keep collecting those papers for that. So, I is interesting is the conclusion is that the articles with results describing titles were cited more often than those with metal describing title the outcome is something that I am looking at not exactly the method right how do you arrive at.

So, therefore, you know there are various ways of looking at, depending on what you wish to in the project from your work whether you are developed a method or your successful you the existing method to arrive at certain novel discoveries, you have to frame your title according to the kind of work that you are done, and these two examples are just to show that you know there are even research, you know projects to understand and how you arrive at titles.

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### The Importance of Titles

The title of your manuscript is usually the first introduction readers (and reviewers) have to your work. Therefore, you must select a title that grabs attention, accurately describes the contents of your manuscript, and makes people want to read further.

**An effective title should:**

- Convey the **main topics** of the study
- Highlight the **importance** of the research
- Be **concise**
- **Attract** readers

<https://www.springer.com/gp/authors-editors/authorandreviewertutorials>

You know you have to understand that that also shows there is a challenge and there is no one common you know solution to everything, and you have to be innovative and it dissolve evolving field you know you how to think a lot about your own work and talk at that. So, now, I am going to walk you through with some of those guidelines that are given by journals.

The reason I am putting journals is that you know and the end of the day when you do any science project. So, what do you is you write up a you know manuscript and try to publish in a good journal and there are publishers right they who you know publish a number of journals depending on the speciality and so on for example, springer is the

one that I am going to discuss now, because this also published this particular house  
springer house publishes a large number of scientific journals..

So, I am taking some of those guidelines for the journals, and it is extremely important  
because when you when you try even and you think that I am going to have done my  
research my project is complete how to put together as a manuscript. Even before you  
put together as a manuscript you know when you know your data is ready in this; what it  
they are conveying you should know as to which journal I should target, because as I  
introduced in the beginning it is like thinking of.

For example, if you from tailor and I work for a readymade garment factory, then I  
should have thought about exactly as to what I am going to stitch am I going to stitch a  
trouser, am I going to stitch shirt, am I going to stitch a skirt and if that is a case what age  
group I am looking at it and then then if any talk about age group and then I have to look  
at what is the population am I going to do it for the Indians or I am going to stitch this for  
example, Europeans.

So, depending on who is going to wear that I have to arrive at certain you know variables  
size parameters and so on then only you know if someone can someone would buy. So,  
exactly the same way, I should have thought about the product, as to who are the  
consumers who are the customers then arrive at that.

Because I do not know who that person is, but I am talking about somebody in the age  
group say from ten to 15 years, that is what you think and then you design a skirt and  
then stitch and keep it ready. So, you do not know who is the exact customer, but you  
know that is the age group because the size, the waist the circumference other thing you  
have certain measurements to arrive at and then you give certain you know kind of  
flexibility therefore, people can you know adjust the size according to their you know  
body shape and other things.

So, this is something that you need to think the exactly similarly when you write research  
article, because you need to know what is the journal that I am going to publish or I  
would like to submit at the least and whether they accept the kind of work that I am  
doing..



So, that you are to read there are every journal has what is called a scope alright it says that it narrates as to what kind of study they would they accept. So, there are speciality journals that accept that. So, you need to read the guidelines and prepare accordingly and you also have to keep in mind that you know this is my priority and there is no guarantee that your paper will be accepted by the journal.

It may be rejected then you need to know; what is the second journal that I should try what is the third journal I should try and so on therefore, you should have some idea on that. So, therefore, I am going to give you the guidelines given by the journal, because that would also help you to understand the guidance that I am suggesting is not for you know just for your thesis report.

But even for a scientific article that is to be published in the journal, there are guidelines that you need to understand and read and you know follow it lets see what they say. So, this is what were the back in you know reproduced by from the springer's website he says the importance of titles, they again emphasizes as to why and how the title should be.

The title of your manners could usually the first introduction readers how to help work exactly that is what it is well when they talk about first introduction, readers how to your work assuming that has been published accepted for in a publication it has come in the table of content, but I would go one step further to say that it is the first introduction of your work, to the editor because when you submit your article.

The first person who evaluates your manuscript is the editor. So, it will looks at the title first what is that work is about there itself it sounds very unattractive is not going to bother doing into abstract, but if it sounds good then he is going to look into the abstract and read and then see whether it has any significance then you will send it for review. So, I will again discuss about the review causes little later.

But what I am saying is the even before publication the title patters right here it talks about the reader therefore, you must select a title that grabs attention like you know I gave example hungry [FL] that the dominos it is a catchy word you know it is an attraction accurately describes the contents of your manuscript remember accurately meaning you cannot over sell your product in the sense your science by making a title which is very attractive.

But you know your know your actual work may not be that attractive. So, you have to you should describe, and make people want to eat further that is important element it should be such that you know you should be you know they should be willing to read the abstract they should be eager to read the abstract, and the abstract should be far more compelling for the reader to go and read the rest of the sections of the manuscript. So, you should really pay attention and remember when you write any scientific article, that is there a there as a paper or as you know online journals you have no you know the reader they are not.


You cannot compel a reader that they have to complete reading your manuscript before moving to the next you know article, because they are on their own will you know they can just close your paper and go to the next one if it is not found to be attractive. So, therefore, unless you are able to convey and you know sort of sell your ideas the reader it is not going to read.

So, that is in your hand by writing it much better. So, it is again like what I said earlier gave examples of advertisements right 30 seconds advertisements sort of compels the consumer to buy a product right the title abstracts or like that, you know you are to compel the reader to read more therefore, these are extremely important abstract like you know 20 seconds of advertisement, but the title is like the catchy words that slogans that I have just now described for various you know brands..

So, that is how they are able to attract the consumers let us see what is how to what is an effective title should be looking like. You should convey the main topics of the study you cannot cover everything, but he should take the major points of your study should be conveyed, highlight the importance of the research right meaning what is the outcome you know that is important be concise, it cannot be lengthy they have to be very very concise attract readers you know it should generate interest in the reader therefore, he or she would continue reading it and again to emphasize the catchy slogans for example, Garnier take care.

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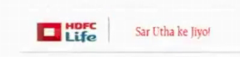
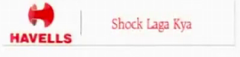





### The Importance of Titles

The title of your manuscript is usually the first introduction readers (and reviewers) have to your work. Therefore, you must select a title that grabs attention, accurately describes the contents of your manuscript, and makes people want to read further.

**An effective title should:**

- Convey the **main topics** of the study
- Highlight the **importance** of the research
- Be **concise**
- **Attract** readers



<https://www.springer.com/gp/authors-editors/authorandreviewertutorials>

You know winter creams for example, you know there you know skin becomes dry. So, you apply this cream then then you feel better or for example, Havells most of their you know electrical appliances like from in a cable everything shock, [FL] I mean again these skills you take care you know. So, these are the attractive slogans that you know connects with that product and urges the consumers to go and buy that because you know you really appreciate, you know the need of a good shoe then you are you know forced to run on an uneven surface with your slippers.

Then you will feel that my god I should have had a shoe to run on this right things like that you know likewise when we somebody talks about shock [FL] only when you know how to shock then you understand that I should have really bought a better appliance that does not you know cause this kind of damages. So, that is where they are catching it, to say that you know you go back do not buy what you have bought by this one this probably will protect you and so on.

So, that is any extremely important and your scientific articles are likewise are extremely important; let us see what more the springer group says it says writing a good title for your manuscript can be challenging.

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Writing a good title for your manuscript can be challenging! First, list the topics covered by the manuscript. Try to put all of the topics together in the title using as few words as possible. A title that is too long will seem clumsy, annoy readers, and probably not meet journal requirements!

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It is not easy you know you are not talking about the manuscript, we are talking about the title the title itself is challenging indeed this challenging, first you know how do you really go about doing it, it says the list of the topics covered by the manuscript.

You go and list what are the topics that your manuscript covers it could be several lines, try to put all the topics together in the title using few words, you convert them into you know few words each of the major bullets that you made and then you try to work around with the words to make it as a sentence that sort of summarizes and conveys what your article is about.

But you should make keep it in mind that a title that is too long we will seem clumsy annoys readers because they will give up because I have twenty articles read the titles in a issue. If I have to spend one minute to read the title of one article and try to understand I get irritated because I want to spend; not more than 20 seconds for a given you know title.


So, therefore, it can annoy, because I have to redo because I have to go and read or start from the beginning with already forgotten what you know your said in the first few sentences, I am probably not meet general requirement again see journal is also would say that your title should not exceed, these many words or characters you would understand that. So, you do not have that liberty when you have a thesis submitted for your institute university, you have the liberty to choose you know a little longer title or

your man your entire thesis can be running into you know 100 pages and so on, but when it comes to research journals each journal again I told you. So, you need to know where you are; where you wish to submit.

A first manuscript which sectional they generally want to publish because there are original articles which are lengthy, allows you to you know elaborate your discoveries there are short notes or short articles, that may not give you much of in a space for room for you to write they will say the entire article should not exceed say you know 10,000 words right.

Some journals even put characters because they do not want to exceed say five printed pages, they will say only five figures to tables and things like that. So, you how to prepare your manuscript accordingly, even title at times they it cannot exceed say you know 15 or 20 words. So, that is a limit. So, you need to know exactly.

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### The Importance of Titles

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**An effective title should:**

- Convey the **main topics** of the study
- Highlight the **importance** of the research
- Be **concise**
- **Attract** readers

While it is important to be short and concise, you do not want to be overstretch or incorrect! The title should reflect **exactly** what you did in your study. Therefore it is better arrive at a title after the entire paper has been written!

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So, that is again you have to follow that while, it is important to be short and concise you do not want to be over stretch or incorrect meaning you cannot you know say for example, it is like somebody you know making some bakery item, and then you are selling it as this is a pizza right. So, then you and you need then you know it is not pizza.

So, what do you want to do you are going to you know go on alert the shop guy saying that what you mentioned its pizza, but what you are given is something different even

though that what you are eaten maybe you know taste good, if it had been told by the original name probably you would not (Refer Time: 36:50) you know you would not mind you may go and.

Buy again, but just because you falsified the shopkeeper falsified that is pizza, then you get angry on him because he did not say exactly what it was exactly that is what it is in research article as well you should exactly you know convey in the title, what your research is about you cannot falsified right therefore, it is better to arrive at the title after the entire paper has been written.

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**How to write a "good" title?**

- Fewest possible words that describe the contents of the paper.
- Avoid unnecessary words like "Studies on", or "Investigations on"
- Use specific terms rather than general
- Avoid abbreviations and jargon

Example 1 - "Recombinant Human Antithrombin III" This doesn't tell the reader much about the paper. Instead "Expression of Biologically Active Human Antithrombin III by Recombinant Baculovirus in *Spodoptera frugiperda* Cells" tells the reader what is in the paper.

Example 2 - "On the discovery of a useful new laboratory research method for isolating and purifying the lactose-degrading enzyme  $\beta$ -galactosidase from the economically important, yogurt-producing bacterial species *Lactobacillus bulgaricus*". This needs streamlining!

Example 3 - "Studies on a snake", again too brief. What snake, where, what kinds of studies?

<https://www.uwlax.edu/wimp/samples/bguidelines.doc>

So, you complete it then you can you know go and look at and make an appropriate title. So, let us see how to write your good title. So, this should fewest possible words again several jobs you know suggest that that describes the content of the paper. So, these are the two important elements.

So, it should be as few the words as possible and reflect, what you are in the paper is all about avoid unnecessary words like studies on investigation on because research is nothing, but studies or investigation. So, saying it again actually is not good because you could of instead of that word you could you use something else, you know to make your, you know title for more attractive. Use specific terms rather than general we cannot use very generic statement, you are being very specific statement that you know sort of

conveys what you have gotten avoid abbreviations; you cannot use abbreviations in title because abbreviations with themselves do not convey anything.

Unless you define what it is just because you want to cut down the number of words you know have an abbreviation of your title is meaningless because it does not convey and jargons of course, you need to avoid. Let us look at some example again, these examples are not something that that I am putting here these are linked that are given here the reason I am putting this link is that for each one of is one of these examples.

If you go to these things that are shown here they would give you far more important you know information as to how to arrive at you know better title. So, that is also a kind of extended reading for you. So, example one this is a title that is shown here recombinant human and Antithrombin 3.

This title looks in a way very short there is nothing like studies investigation and all. So, that that all taken care, but you know it does not tell the reader much about the paper I am not sure when I read this title although it looks human recombinant Antithrombin 3, it tells about three things one it is recombinant its Antithrombin 3 is a protein and then it says recombinant meaning these are you know genetically you have taken the gene and probably expressed in some other system, but the protein is similar or identical to the human protein.

So, this is what it says, but it does not tell as to what is your work is about is it for developing a method to produce more amount of recombinant you know Human Antithrombin three as a therapeutic.

You know molecule or is it about activity of this particular protein that they are investigated what it is about this this information is not conveyed. So, if I am looking for a paper that talks about increasing the efficiency of this particular proteins activity let us say. Now I stumble upon this particular title these not going to compel me that I should read more because you know it does not immediately convey that this paper was about you know studying the activity of this protein.

So, you can change it for example, expression of biologically active Human Antithrombin 3 by recombinant baculovirus you know in Spodeptera frugiperda cells.

This is a title, which you know pretty much summarizes everything one it talks about that this work was about a human protein called antithrombin 3 and it was about expression you are expressing the protein, and biologically active meaning that you are producing this protein or expressing this protein elsewhere that is why is recombinant not in the human cells, but some other system which is active and where do you express it is a backlow virus mediated expression in cells derived from possibly some insect because this our insect cell culture models.

See it tells exactly kind of what is the work that you are done. So, you are able to take the gene out of the human genome, which codes for thrombin put it in in a viral vector and express the protein you know insect cells now the protein is biologically active.

Talking about therapeutics right so, you can now isolate the protein and use as possibly you know in individual that are deficient for this protein this is what it explains right. So, that is an important element in any titles that it conveys what exactly you have done. The second is about another example on the discovery of a useful new lab research method for isolating and purifying, the lactose degrading and saying beta galactosidase from the economically important yogurt producing bacterial species lactobacillus bulgaricus.

Now this meets the second criteria that it comes with everything that you want to know about the work, but the title is a like abstract it is too long too detailed. So, you know it is not looking like a title it is much more than a title therefore, it does not you know sort of help you in in terms of you know getting the readership for particular thing..

So, this is these are I am giving you two extremes and you need to know how to you know do you can cut down all unnecessary words and some exercise we will follow little later. The third example you know extremely short sweet studies on a snake right it sounds. So, good, but what it is about its too brief, what snake, where did they study, what kind of studies you are done it could be about for example, this snake its behaviour it could be about its reproductive physiology, it could be about a certain sensory perception or it could be about the skin how you can use it for a some commercial application and so on.

So, you do not know exactly what the studies are and so on. So, therefore, one need to think of you know evolving a appropriate title based on the work that is done.