

Course Name: Technical Communication for Engineers

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Week- 08

Lecture 08- Conclusions and acknowledgement

Hello everyone and Namaskar. In this technical communication for engineers course, we are going to discuss about conclusions and acknowledgement. And this section obviously will come after the result and discussion sections. And this is not the end. After the acknowledgement, we will be also having list of references or bibliography in case of PhD thesis. So, that section we will be also discussing but little later.

So, what are the things which we have covered so far? Results and discussions up to this section and now we are going to discuss about conclusions and acknowledgement and then of course, we will come to references and other things. Basically, what is a conclusion? So, a conclusion what authors will leave with the readers that these are my conclusions, this is the conclusions of the study. So, you are declaring that these are the findings of the work in a very precise manner. Sometimes conclusions are written in form of paragraph and of course it is a final part of the thesis. Basically write-up acknowledgement is of course should be there but the main write-up part is there. And these conclusions depending on the requirements of the journal, conclusion can be written in form of bullets means point by point can be written or in one para can also be written. I always prefer you know writing conclusions in point wise or in bullet forms like in our power point presentations also. Because, then I can highlight, emphasize all the conclusions very effectively. But depending on the journal constraint requirements, sometimes they do not allow the conclusion should be written in bullet form.

So, we have to write in the paragraph form. And basically, this section will help the reader to understand why your research should matter to them or whoever has gone through or whoever needs such output of the research. Can be this is another challenging part initially for those first time writers or young people that conclusion can be challenging or difficult also. But how it can become less challenging or easy, this is what we are going to discuss here. So, these concluding paragraph again should be clear.

Sum up means focused, means concise that what has been presented so far within the text in the manuscript or in write-up without sounding redundant. That means there is no repetition. This is another important thing and this I have been always emphasizing that each section should have uniqueness, should not be repetition and there should not be any redundancy either. So, effective conclusion paragraph can also add impact to what have presented in your paper. What the impact it has caused or it would cause that can be presented here. Now, the conclusions which what authors will leave with the readers is that it wraps up the article, manuscript and report. It is just winding up whatever the write-up has been prepared. It also demonstrates the reader about what has been accomplished against the setup, objectives, hypothesis whatever is there. And also it shows the thesis have proved because the PhD thesis, digitations and other things, this is how you bring in the conclusions that these were my targets, these are my results, discussion and finally you say that these have been achieved like this. Further, it provides the reader with a sense of closure on the topic or the work. In that sense, it is a last section. Of course, there are few more sections but from writer point of view, this is the last section. So, this is a declaration of the closure of the work. And also these concluding paragraphs, sentences should encompass a very brief summary of the work but very brief summary that has to be very brief. So, you are trying to link with whatever the objectives were there and how these have been achieved, what is the impact of those results are going to be. So, these are again should be written and the main point must be included. main points of achievement should be included. If a good introductory paragraph has already been written, something similar with different wording may be written. In order to avoid redundancy, that is also possible. But in a very brief manner, one should write this one. And a concluding para may start like there are three types of rocks which are important to know for a civil engineer. So, this is just an example that one can. So, initially that means in this paper rocks were analysed and finally it has been found that there are three types of rocks and then you are concluding like this in a very bold statement. And further you can also write that these three types of rocks are igneous, sedimentary and metamorphic rocks and they are three classes for civil engineer must know. So, these are the examples how a conclusion paragraph can be written.

Again, if it is a short paper, the conclusions would be short. If it is a long paper, a PhD thesis, a longer conclusions can be written with different paragraphs. But generally conclusion as I have said I prefer in a bullet form but if it is not allowed then you can have a separate paragraph for separate conclusions. For example, one write a paper about earthquakes then each paragraph would probably be about one particular earthquake in the conclusion. So, the paper includes many earthquakes but in conclusion if say 3 then in conclusion you can have 3 small-small paragraphs for all 3 different earthquakes.

So, each earthquake should be briefly mentioned again here so that a complete linkage is established. For example, here earthquakes are very complex natural devastating phenomena. So, after discussing all these three earthquakes, then you can write such a bold statement that they are very complex and natural devastating phenomena. Also, in the conclusion, we should leave the readers with something to think about. You know that everything is not complete, there are many things to be think about.

And also we can provide some suggestive sentences may be written that we have a lot to learn about earthquakes. There is a saying that for example related with earthquake that in order to predict earthquakes we need more earthquakes. So, this is the almost same thing that we have to lot to learn about earthquakes before we go for forecasting or prediction. But this can only come in the conclusion section. you are leaving with a thought to the reader that this is the situation, this is the limits and more work is required in order to achieve those objectives of forecasting or prediction. So, the structure of conclusion. Conclusion is the opposite of the introduction. Introduction begins journal and ends specific. So, here the introduction from top to bottom and this is the thesis statement that is the body of the paper. Then, rephrase thesis statement here and conclusion begins specific and move to the journal and this is what you do.

So, here you end up with the conclusion like this. So, this sequence has to be followed that conclusion is opposite to the introduction. Introduction begins with the journal and end specific, conclusion begins specific and move to journal. That is why this triangle is shown just opposite to the introduction part, hierarchical. Now, summarizing conclusions.

So, depending on your research topic and the style of your paper, you may choose to write your conclusion according to specific type. So, three types which we are going to discuss. So, first part is summarizing conclusion. or one way of doing writing conclusion by putting the summary in form of summary, conclusion section. Like summarizing conclusion is typically used for giving a clear summary of the main points of your topic, title and the thesis, the work which has been done. And this is considered the most common form of conclusion. This is how the people practice that they summarize everything in the conclusion in a very brief focused manner. Though some research papers may require a different style of conclusion, not in summary form but in other forms. So, what is the other two forms? Externalizing conclusion. So, in this, conclusion presents points or idea that may not have been directly stated or relevant to the way you presented your research and thesis. So, these types of conclusion, externalizing conclusion can be effective because they present new ideas that build off the topic and initially present it in your research. And a final type or among these three types of conclusions is the editorial conclusions. So, in a manuscript write-up, we do not write but from a type of conclusions, this is one should also know. If suppose somebody is writing

an editorial, then in an editorial conclusion, you are presenting your own concluding idea or commentary. you are suggesting something that this is the thing should be done.

So, such type of conclusions will connect the thoughts to the research which has been presented and might state how the one feel about outcomes, results or topic in general. So, if you read an editorial in a magazine or in a journal or a newspaper, you would find that at the end they will suggest something. They will say or they will bring their own conclusion or own idea or commentary about a problem or an issue or whatever is there. But for a scientific writing, we do not have that kind of freedom at the end to put our own ideas because if those were there, we should have attempted those ideas in our thesis itself or paper. So, conclusions basically should be wrap up of the paper and it is basically you are bringing your research or work in a tidy package so that a reader can understand all sections and the entire work which has been presented through a manuscript.

Now, this sentence or topic sentence should summarize what has been mentioned in the objectives and also suggest to the reader about the accomplishment against the said objectives. Do not simply restate thesis statement, means say you do not repeat the things but you say that these were the objectives, these are the accomplishments. And there should not be any repetition and ultimately there should not be redundancy. So, if a sufficient discussion section is there then conclusion should be very brief. Some examples I have already given. And sometimes if we have to repeat then the best thing is to rephrase everything. Rewrite these sentences, statement with fresh and deeper understanding in the conclusion. And of course, in conclusion section, there is no place for bringing a new idea or new suggestions here. Supporting sentence should summarize what have already said in the body of the text. So, whatever you are writing that should have a direct linkage within the previous sections. So, if a brilliant idea tries to sneak into the final paragraph, it would be better to take out and let have its own paragraph in the body and leave it to completely out of this one. So now, what are the tips for each body paragraph to be summarized in conclusion? Wrap up the main points. Closing sentence should help the reader to feel a sense of closure. And closing sentence is the last word of the subject or you can say clincher which basically demonstrates the importance of the ideas. Propel reader for a new view of the subject and always end on a positive note.

Never end a manuscript thesis on a negative note. Bring positive side of your work all the time because all results might not be positive. All relations, correlations are not to be positive. But you have to highlight and end with always a positive note. Closing sentence should make readers happy, glad that they have read the paper. If a negative thing is there, then one would not enjoy. Let me share one recent incident. I was watching a video and that initially it was telling that generator has been created, perpetual generator. And at the end of that video, he says that this is all false. So, the point which is coming here,

the gland, and one feel little sad that why he has wasted so much time to know at the end of the video or end of the thesis or paper and this is all was false. So, it is not good. One should have a closing sentence so that a reader who have read the entire paper should be glad that he has understood or he is having now insight about a particular subject. Beginning with a unnecessary overuse phrase, should not use. These are the things which concluding is that do not work, should be avoided. So, unnecessary overuse phrase should not be used. Rephrase it. And as I have also said in the earlier discussions, lectures that once you have finished a write-up, show to your friends. First, you should read a few times, then show to your friends and whatever the suggestion they give, you should implement. So, they would be able to find out that you are using overused phrase. The same phrase, same sentence, same type of sentence is being used as elsewhere or several places. So, unnecessarily these should not be there, they should be completely avoided.

And the same thing is also in case of speeches or power point presentations that those phrases should not be repeated, but they come across as wooden and trite in writing. I know some people while speaking they use certain words repeatedly and sometimes it becomes irritating, sometimes they lose the point because the word they are repeating. For example, they will for a 10 minutes speech they may say 20 times the word right. After each sentence, they are saying right and that should be avoided. They should self-analyze or see their own recordings and see that what they are repeating again and again.

Similarly, here in our write-up, we should not use or repeat or overuse the same phrase again and again. So, in conclusion, in summary, in closing as shown in the essay, that kind of work in the speeches, stating the thesis for every first time, introducing a new idea or sub-topic in conclusion. These things do not work. So, making sentimental, emotional appeals that out of character with the rest of the paper. So, such things should not be there at all. There is no need of putting any emotional appeals or other things or sentimental sentences. There is no scope for such kind of thing. So, whether it is an oral presentation or a written presentation, there is no space for such things are there. It is completely avoided. including evidence like quotations, statistics that should be in the body of the paper, not in the concluding part of your paper or thesis.

Now, some of the tips for good conclusions for a research paper or write-up. Restudy your research topic and thesis statement. Summarise your main points or findings, results. Discuss the significance of your results, findings, importance. Leave your reader with something to think about, a thought you should leave. I gave the example of an earthquake or earthquakes. Your conclusion should not contain any new information, new idea or new evidence. Because you are concluding of whatever has been done. So, at this stage there is no scope for doing this thing. And the best conclusion summarizes the paper without being redundant. and also express the impact of the research. So, this is

very important point that the best conclusion summarises the paper without redundant, no repetition is there. And it also brings the impact of the study, the research which has been presented in the paper or write-up. So, this is very important point related with this. Now, the last write-up section of your paper is that is the acknowledgement. I would say that if data has been borrowed, data has been taken or help has been taken from somebody towards analysis for instrumentation, anything. or your supervisor, guide, your higher-ups, one should always show gratitude towards them, should acknowledge in this section, under this acknowledgement section. This is a good practice and nobody can say anything that you have taken my help and you have not even acknowledged that thing. So, I would say it is an essential part of any write-up. You should acknowledge but not acknowledging your parents or friends there but acknowledging the real contributors, direct or indirect contributor towards your work. So, a page of acknowledgement. In case of a PhD thesis, a page can be devoted. But in case of a project, a report or a paper, only one para would be sufficient up for the acknowledgement section. So, as I have said that manuscript or research paper the acknowledgement we kept almost end of the text. So, this is the last part of the write-up or text. Of course, this would be written before references and bibliography that is going to be our future discussions. Also, the purpose of acknowledgement is that it allows us to thank all those who have helped. in the study carrying out research or those who have funded the research and those who have provided the platform, facilities. So, this is the right time, this is the right section to acknowledge, show the gratitude towards those things. There is no harm and it brings a very positive side of yours and as well as readers that they think that this is not your own, everything is done by yourself. But many people have helped directly or indirectly. So, here you should while writing acknowledgement, you have to have a careful thought and the order which you need to think before writing as per the help which has been provided. Like those who have provided financial support, you may give acknowledgement at the first. Those who have given less support, you can give in the acknowledgement paragraph, you can mention their support in last. So, while the structure if it is supervisor guide you can mention first supervisor, second supervisor, second guide. Then other academic staff in your department may be head of the department, may be dean, director depending on where you are working, who has supported and other things. Then who has provided technical support that you can also acknowledge. Academic staff from other departments in case you have got help from there, instrumentation centre, computer centre, other things. May be the other institutions, organizations or companies those who have reported and data source which you have used. Data source if you have taken data you can also give in the list of references. At the same time for overall you know reference or support you can also mention in the acknowledgement section. Sometimes, past students can also be acknowledged. And finally, of course, family and friends, this section is only in case of a thesis when you have got freedom of putting one or two pages of acknowledgement. But

in case of papers, you do not have that kind of freedom. So, restrict that is why I have put asterisk here that only if you wish to acknowledge the help of family members or friends, make sure that you restrict the wording of your thanks to a relatively formal register. And only in case of PhD thesis or big write-up one should do it but otherwise these are the people to whom you should acknowledge or show the gratitude in your work. And now very general advice to express is your appreciation or acknowledgement in a concise manner and to avoid strong emotive language, Emotions should always be avoided, sentiments should also be avoided. And one should also note that the personal pronouns such as I, my, me are nearly always used in the acknowledgements while in the rest of the project manuscript such personal pronouns are not used generally avoided, One should write in the third person rather than I, me, we kind of thing. Only in acknowledgement section one can write that because if a paper has been written by 4-5 people and you would like to acknowledge, a news author would like to acknowledge his supporting organisation or financial support then he can write that such and such author is grateful to such organisation for providing financial support. because the financial support was not provided to all. So, that is why this liberty is there in the acknowledgement section. So, these are the list of things which can be included which we have also discussed. Every project is different and then acknowledgement has to be different and should suit the particular situation, particular funding, particular support and so on. So, now we are coming to end of this conclusion and acknowledgement section. So, common expressions used to acknowledge assistance. You have received financial assistance, you have received assistance in the labs and so on so forth. So, like for example, I would like to express sincere appreciation to such and such. I would like to offer my special thanks to such and such. Advice given by such and such has been a great help in achieving those results. I am particularly grateful for the assistance given by such and such and assistance provided by such and such was greatly appreciated. A similar kind of sentences can be written and if you want to acknowledge your supervisor guide then you can also write his name there and then say that providing me the valuable support, valuable ideas and valuable help also, You can also write like I would like to thank the following companies for their assistance in the collection of my data etcetera such things can be written. So, this is basically a non-exhaustive list of sentences depending how much and who has provided you can phrase. But for each appreciation, each acknowledgement use different words or different phrases that would be a good otherwise do not repeat that I would like to express such and then again in next sentence you say I would like to express my sincere appreciation to such. So, these things can be done. Finally, you can also write like my special thanks are extended to the staff of this department, company, organization, institute for providing such lab facilities or assistant in the field and so on. So, with this we complete this lecture or this discussion about conclusions and accomplishments. Thank you very much. Namaskar.