

**Course Name: Technical Communication for Engineers**

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**Week- 03**

**Lecture    03-An    abstract    vs    extended    abstract    vs    summary**

Hello everyone and welcome to the new discussion under this technical communications for engineering and science students. But as said also earlier that this course is also applicable for other professionals as well. Now in this discussion, we are going to have about the comparison between an abstract, extended abstract and summary because there are sometimes lot of confusions among people. So, I thought that I will bring this discussion here so that we should have a complete understanding about different terminologies which we are having here. So, first is abstract and extended abstract which we have seen the definition but just to recap that an abstract is gist account of a particular work in a few words and those few words that means we have to be very precise, brief focused account of the work which is presented in the subsequent sections. So, for example also it is true that writing an abstract may be similar steps to writing for a summary.

Now I am trying to link with the abstract and summary but they have different objective and requirements. What are those things that we know that an abstract is a short generally one page maximum. Descriptive paragraph over viewing your entire paper or manuscript, dissertation, thesis or project. from introduction to the finding or future study.

So, everything is in abstract form that is what is this. Now in this say abstract should summarize the main points of your write-up without specific details. This point we have also discussed while discussing the abstract. But in comparison, they should communicate if relevant main questions of your write-up. What was the target? What the questions were raised? And how these have been handled? The methods, the importance of results, findings and how they shape a theory or answer your questions.

So, one starts with a hypothesis. How much that has been achieved? That is what abstract is. So, important points about an abstract as we know start with the main point. In a similar way, we have discussed these things but now let us look how in summary, extended abstract, abstract these points will come. So, important points that start with the main point and in case of abstract, the main point is the beginning statement which

should describe the main point you are trying to communicate to the reader.

If a work has been done say on COVID vaccination then that main point should come in the beginning. Similarly, this is also true that in the thesis or in dissertations or that may be a research topic which all depend on what kind of paper, manuscript or report is being written. So, all these things have to come in the background then only this main point will come. Second is keep it concise. That I have been repeatedly saying and in future discussions also for different sections in writing, technical communication that point might be coming again.

So, the brief discussion of your article, very brief, very precise. Only talk about the main points. between the introduction, body and conclusion. This is the part of abstract. So, then we will be comparing with the extended abstract.

Remember the length and this is another very important thing as also mentioned just few seconds before that generally an abstract is written for one page or 300 words, 500 words depending on what the publisher or conference organizer is asking. Or what is the requirement in an individual institute or a company or organization? So, abstract is meant to be a paragraph. Therefore, each piece of information given in the abstract should be short key part of the article. As we discussed, it is the gist of the paper, gist of the work. And further, follow the same order.

Now make sure your abstract follows the same order that paper is written in. That means your paper will have introduction, methods, data and whatever the algorithms or models which have been used to analyze the data or data collected in the field and all kinds of things. And then you come to results, discussion and conclusion. Therefore, the same order should be followed in case of an abstract or summary or other things also. And only one should present the facts, factual statements or observations and completely should avoid opinions, repetition or any bluff content.

One should also have discussion during the first 2 presentations or first 2 discussions that the title should match with abstract. And the same way, the abstract should represent what is inside the manuscript or a paper or report. So therefore, only facts should be narrated, only facts should be written in the abstract. create an effective ending. That means the last sentence should be able to effectively wrap up the findings of the article.

See, what we are trying? We are trying to highlight, we are trying to focus the reader that this is the finding. These are the new understanding about a particular subject or phenomena or a disaster or whatever. So, that has to be highlighted but just in 1 or 2 sentences and that can be your last sentence. So, end with the bullet kind of thing, end

with a positive note. Now when we go and when we discuss then an extended abstract then it is a short research paper.

Larger than abstract, larger than number of paper size or pages, anyway it is that name implies the prefix extended. So, it is a extended abstract paper whose ideas significance can be understood in less than an hour of reading. That means it should not be more than 4-5 pages. Again many conferences and elsewhere also, they will instead of asking simple abstract and not asking a full paper, they go for a middle path and that is the extended abstract. They may require that you submit a 5 or 6 pages of an extended abstract.

And that should include whatever the idea of hypothesis which you have worked and what are the significant result. The sequence as we have discussed of the things should also be maintained here. But here the page limitation is not as constrained as in case of an abstract. So, an extended abstract is not simply a long abstract. This is another very important thing because in extended abstract, it is a short research paper.

Almost everything can come in a brief manner that is in extended abstract. So, if somebody says that your abstract is going 2 pages, so you cut just by half. It is not like that. So, it is not a long abstract. This is extended abstract.

So, the extended abstract should contain references because in abstract, we have not included those things. Comparison to related works and other details expected in the scientific paper but not in an abstract. So, that is also important part. Now writing an efficient abstract is hard work. While writing an extended abstract is also equally hard.

But will it bring increase impact on the world by enticing people to read the publications? See our aim, whoever is writing, the aim is that a reader should read and if it is interesting and nicely written, nicely presented, it is likely that the reader will go through. But if it is again long and vague and facts have not been presented then maybe in midway, the reader may close that thing and may not read. So, this is important that writing an efficient abstract is hard work. So, one has to be very-2 careful that everything comes but in a detailed way compared to an abstract. Now generally, some conferences request for an extended abstract that I just mentioned that they do not you know require simple abstract of 1 page or 300-500 words.

But they may say okay 6-7 pages extended abstract. So, extended abstract in a preliminary summation that summarizes the contribution of a page. So, once you submit an extended abstract, it will be reviewed. Normally, this is what is a convention in the conferences and if they find suitable for the conference, it would be accepted. But

however, if that is not matching with the theme of the conference or not nicely written, the results are not presented or nothing new in the research work or your article then there are chances that it might be rejected.

So, in the conferences generally, a full paper is about 10-15 pages long. But an abstract as I have said earlier that it can be into 4 pages, 5-6 pages depending on who is organizing and what the limits of pages they are keeping. And within these pages, you can have figures, explanations and references. Figures, I have already mentioned that whenever you present a figure in extended abstract or in full paper manuscript, figures should be neatly drawn with all kinds of levels, axis, scales, everything. And what are the key ingredients in the keys of a good figure, we will be having a complete separate discussion or elaborated discussion on this.

So, figures are very important in case of an extended abstract and abstract as we know that in generally is a few 100 words long and maximum 1 page. There are usually strict limitations on length of extended abstract. No conference or no journals will allow you to go as to 10 pages or 7 pages. They will say okay restrict up to maximum 5 pages. So, one has to bring within that bracket.

An idea submission should have the reviewer fascinated within the first 5 minutes of reading. So, basically it should be interesting and only you can make a reader interesting to read your manuscript or an extended abstract if it is having some important findings, some innovations and nicely presented. So, this is what that within first 5 minutes, the reader would decide whether he should go further and read it or not. So, within first 5 minutes reading, excited within 15 minutes and if satisfied then may read the entire manuscript. So, this is you know a general sequence or time steps which are you know followed by normal reviewer or reader.

Now if an abstract or extended abstract fails any of these above test which we have just discussed. then it may be rejected no matter how good the research is. You know one may have done wonderful research but the results and everything an extended abstract or abstract does not reflect that good research. Then there are chances that such manuscript paper might be rejected by the organizers or by the editors.

or by the publishers also. So, neither overlook the importance of introduction, examples and conclusions nor eliminate relevant images because of number of pages limitations. So, if a figure is important, keep it there. Images is a common term here has been used. Images also it means the figures and not only the satellite images or photographs.

So, one has to make a balance. One has to find out what are the important things which

he would like to present in extended abstract and keep all those things so that your reader will go through entire whatever 5 or 6 pages. Now many times, our work might be read by many non-specialists of our research area. This is important because all the time your readers are not specialised in your field. you know frequently or usually they might be from different fields. But things are written nicely, presented nicely then even a non-field person or non-specialized person might go through that manuscript or paper.

So, extended abstract must be written in a clear, straightforward and easy to understand manner. It can be easily assimilated. So, it is possible that if we follow that sequence as we discuss in case of abstract then extended abstract can also be there. Doing so, we can attract general public to our research. And if a large number of people are going through your abstract and if they are using in their research or quoting or giving reference, obviously it will bring a better citation.

And citation is important today. in case of research like in social media, we say likes and dislike kind of thing. So, citation falls in that category but it is more scientific in that sense. Further extended abstract is expected to have a moderately detailed account of work. Why moderately? Because it is not a full account of work. full account of work will be presented in a full paper where generally there are no limits of pages or figures or any other thing.

So, it is an extended abstract or again a brief paper or brief thesis or a small part of your thesis. So, an extended abstract can be in the form of short paper. This point we have already discussed. So, extended abstract is not simply a long abstract. Extended abstract should contain whatever the references which have been used or cited within the text.

Comparison to related works, if somebody has done already work whether your work is improving on that work or it is producing different results. So, that kind of thing should also come in your extended abstract. And other details expected in scientific paper but not in an abstract. Now in some way, an extended abstract is also a research paper in which whose idea and significance can be understood in less than an hour of reading. So, writing an extended abstract can be more demanding than writing a research paper.

Because while preparing or writing a manuscript, you are having freedom to write to as many pages as possible or when you are writing a thesis or dissertation or a project report or a proposal something like that. But here there is a limitation of the pages. And therefore, it is equally demanding or I would say little less demanding than an abstract. Extended abstract because it is having flexibility of number of pages. So, there are many things can be omitted in an extended abstract which are like for example future work which generally we add in our manuscript at the end recommendations for future work.

So, that can be omitted or avoided in an extended abstract because you do not have more number of pages available. Secondly, the very specific details of test. You know you have used certain instrument, you have done the test. Now you do not want to give too much details about them because that details can only be provided in a complete manuscript or full manuscript. Institutional information where these things have been done, who has sponsored and other things that can also be avoided because of page limits.

And ramifications that are not relevant to key ideas of an abstract that can also be avoided in the extended abstract. Now another term which is used and also this summary word which is more or less quite close to like some people also use word executive summary and also use word synopsis. So, it is a much longer version of the abstract containing more details, visuals means figures, charts and maps and opinions. So, this is the freedom you are having in case of summary or synopsis or executive summary that you can also express your own opinion about certain work which has been done. So, summary includes your entire write-up and its visuals but again it is a shorter length not as equal to a full length paper and more concise than the original document.

Now important points about synopsis and summary that follow the same order. It is true in all cases whether it is an abstract, an extended abstract or in case of summary. So, again this should follow the same order as your paper. Keep it mind in the length because sometimes again summary may be restricted. So, like if you are going to submit a PhD thesis in IIT Roorkee then before your full submission of the synopsis is asked and this synopsis can be 5, 6, 7, 8 pages and then this synopsis is sent to the potential reviewers or evaluators of the thesis.

If they accept then the full thesis is dispatched to them. So, therefore the synopsis should present almost everything of your thesis, of your dissertations but in a brief manner, in a short manner. That is what is a synopsis means or summary is equivalent. You can say or more or less synonym in that sense.

So, keep in mind the length always. Notice that the length the publishers or publication is asking or our organization or office or academic office is asking. Because if you present a synopsis or create a synopsis of 25 pages then it is highly likely that it will come back and that you know the academic office may ask you to reduce to 5, 6, 7 pages. because you would like to give an idea of the work which has been done for that research and for which the PhD thesis is written to the evaluator. Once he gets the idea, once he finds comfortable that he would be able to evaluate then only he will accept.

So, summary or synopsis in that direction. Now other important points, facts and opinion allowed. In case of extended abstract, we said only present facts. But in case of synopsis, we can express our opinions also. So, unlike writing for an abstract, one is not limited to what kind of information being provided. One can include any fact of finding as long as it is a key piece of information and it is relevant to your work and still allows the paper to be concise.

It should not be again very lengthy. Further, you can use visuals. In extended abstract, limited visuals but in synopsis or summary, you can use few more visuals. So, visuals again here means figures, charts and maps and other things. you know a picture or a figure attracts the reader very much.

Because see the psychology or try to understand the psychology. That is why this saying is that a picture tells 1000 words. Because a human tendency or human psychology is to see things rather than read things. You know the first preference is to see things, visuals. And therefore, I have been saying that as far as possible, try to present lot of your results work through visuals, through figures. Therefore, it can convey the things and also provide comparisons rather than presenting in form of tables or other way where one has to go through, read and may not understand the full data or other thing.

So, if the data is plotted inappropriately using a certain type of figure, you can really present your work nicely. So, make sure that all these are necessary to convey the desired message to the reader due to the fact that summarizes need to be concise. And secondly, make sure each visual, each figure, each chart which is used is explained well in the text as well as through captions. This is another important thing. Many times in my own career, I have observed during the evaluation of thesis or papers, manuscript that there is just like if there is a map, they will say a topographic map of this area.

That is it. This is not sufficient. Whatever the information which is relevant with that figure should come very clearly. Who prepared that map? When it was prepared? All these are relevant information. for such things. So, that is why make sure that visual that is used is explained well as summarized for a general audience.

Because audience does not know or the reader does not know. So, you have to provide those details along with all visuals. Remember the format always. Organize the paper in the format that is required by the publisher or by the office, organizers, dean office or conference organizers. Remember your citation. See, this is another important thing in the field of research or elsewhere as I have said in even social media likes and dislikes.

That is nothing but a different form of citation. So, in research domain, the citation and

impact factors are important. Therefore, your citation as any paper would include, citation are important way to credit the sources one used to create wonderful paper. If you have used others' work, you have criticized others' work, you have improved on others' work, must provide their reference or cite their work. That is a good practice.

Then you can very well avoid the charges of plagiarism or other things. So, it is always good that if you have taken a figure from somebody's publication, always give reference to that. Cite that work. You are not going to lose but your paper will become much more reliable. Further that citation abide by the format being used. Now different journals, different publishers in different organisations, citations are written differently.

So, we will have a complete separate discussion about writing references, what is the meaning of citation and other indices. We will discuss separately. So, I leave this point here only that the format should be followed. How references should be written? That format should be followed as per the publishers or journal. or our different institute will have maybe little different format for writing references.

And having literature cited as well, when we go for the background work or review work, we should explore, we should read, find out who has done similar kind of work in that area either in that specialization or if I talk in that field point of view. And that should be cited in your background. So, when we will discuss that part, that will also come in elaborated. So, now we are reaching to end of this discussion between the synopsis and summary. So lastly, I would like to bring these important points again that in conclusion, the summary should be a shorter, more concise version of original paper but can be larger than extended abstract and definitely larger than an abstract.

And it should include all important information and should effectively translate the message from your paper. because it is a representation of your paper. Therefore, every important points which have been discussed in the manuscript should come in the summary or in synopsis. As we know that abstract is a short paragraph so that we have already discussed. So, in future, try to use these points which I have just discussed while writing a manuscript or especially writing a synopsis or summary.

And keep that checklist which we have discussed that the sequence has to be the same as in paper. Bring the point hypothesis and then of course in synopsis and summary, you can also express facts and opinions and recommendations also. So, in future, try to use these checkpoints and writing any abstract or summary or even while you are writing your full paper. Because these facts precisely figure should be represented nicely.



This is true in all cases except for abstract. So, that is why this kind of checklist is very much required. So, with this, I end this discussion. Thank you very much.