## Soft Skills Dr. Binod Mishra Department of Humanities & Social Sciences Indian Institute of Technology, Roorkee

## Lecture - 35 Evaluation and Organization of Data

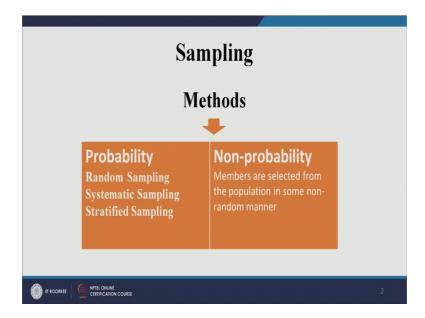
Hello, welcome to the soft skills lectures and presently we are in the writing section, as you remember previous lectures have been on report writing. In course of dealing with report writing prior to this lecture we talked about the various strategies that are involved in the making of a report.

In the last lecture we talked about the various methods of data collection which actually help in the formulation of your report. Dear friends as you remember we had discussed while defining report that, a report is a formal writing which is based on data collection analysis of the data leading to conclusion and to recommendation also if required. Since in the previous talk we have focused on the methods of data collection if you remember and we talked about questionnaire being one of the best methods of data collection when you have a large crowd when you have a large population.

Now, once you sent the questionnaire along with a covering letter of course, you might have got a lot of data, but then what should you do with the data? Because the data that you have gathered is actually huge, now in order to straightaway go for the report you will actually be inundated with lots of information. So, what is needed is a proper evaluation of the data as well as the organization of the data, now how to evaluate the data because whatever data you have collected maybe all of them are not required and even if they are required you have to bring it in a system, in a systematic manner.

So, what do we do, how to evaluate the data? There are certain ways that you can evaluate your data and the first of this who is, is a sampling by sampling because the data for the report has to be representative if you really require your report to help you reach a solution to a problem. Hence, sampling is the method by which you can categorize your data because, you know simply while you collect data it is just not essential that the data required by you and the data that you have received have to be given in the same manner as they are.

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They actually have to be organized and in order to organize them we have to go for some methods by which our data can become representative. So, sampling is one of the methods and sampling can be of two types, there are two methods of sampling first is a probability method and the second is non probability. Now, depending upon the crowd, depending upon the audience from which you have collected data you actually have to decide your target audience and when we talk about probability in terms of sampling your data there are 3 categories the first is random sampling, the second is systematic sampling and the third is stratified sampling.

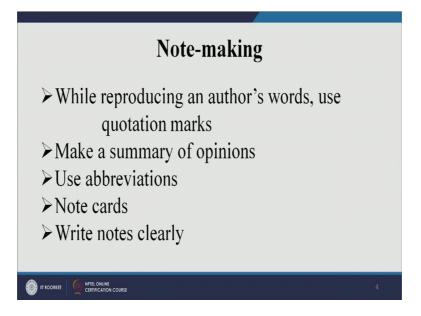
Now, in all these 3 you have to take into consideration that even though sampling or random sampling is the purest way, but then where you have to see that all the representative all the group have to be taken into consideration. But, then it may not appear to be adequate in all the situations because, your data consists of people who are large in number hence you have to decide a way by which you can get the representative data and for that we go for the systematic planning. In systematic planning all you need to do is you need to make a sort of system and out of this system every ninth record will be helpful because you do not want to leave anyone whose data is not representative,

But then there is one another way and that is stratified sampling in such a case what we do is actually make certain strata or certain representative groups and we also decide the criteria for example, when you have a large number of people from home you have gathered the data then you can go for sampling, stratified sampling, where you can divide it as men and women than student teacher then children and adult there can be several categories and based on that you can sample the data which you have got for the report.

But then sampling alone will not do this another sampling method which is non probability, in this you can go by convenience method you can go by judgment method you can go by some other method depending upon the person who is analyzing the data. But, remember while you go for these data what you have to take into consideration is that your data becomes representative because much depends upon the data you have collected and the data you have evaluated since after the evaluation of your data you will have to organize your report.

Your report if it is a sort of technical report it is not going to be limited only to 8 or 10 pages maybe it can go to several pages and for that you need to be extra cautious when you are evaluating, but then when you have done that another thing that comes into consideration as well as question is you have to make notes because simply by evaluating you cannot straightaway go for writing the report or formulating the report. So, what you need to do is, you need to make notes.

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The amount of data which you have gathered as I said in the beginning is you know, is large in number hence, it is better that you start taking notes. While you take notes,

taking note is a very challenging task, while you are taking or making notes both the situations are very challenging. So, what, what you come across is sometimes you come across certain observations of people sometimes you come across some factual information, sometimes you come across certain trends, but all of them you cannot categorize into one. So, there are certain ways.

Say for example, you have decided for yourself as to how you will categorize how you will make the notes. So, that it may become helpful in furthering up your report because it is your notes that will finally, help you to create a sort of outline which will help again when you start writing the report. You see report writing is a very systematic process it is it is not just a momentary thing whatever report you are going to write it may help the other person to take some decision or come to a solution.

Hence while you are making notes please see that if you are quoting from somebody the words of somebody that actually are to be reproduced, but then while you are reproducing you are also to see that they are put under quotation marks, because you cannot reproduce the words or the sentences of a person without giving them some credit. Moreover while you are making notes also make a small summary and at times you also have to make use of abbreviations because, when you go for data collections since it is a very huge affair, you cannot write everything just on a piece of paper. You actually have to segregate them into certain sections and for that you cannot write each and every word each or every sentence.

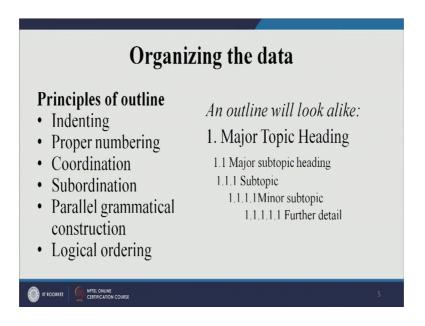
So, what you need is you need actually to develop some sort of strategy by which you also remember and that is why you can make use of certain abbreviations. In earlier days the people used to make use of (Refer Time: 10:36) and all of course, they appear to be abandoned nowadays, but still you can make use of your own notes and there you should make use of abbreviations. In certain cases, if you feel because while you are categorizing you know you have got a jungle of information and when, when you have the data before you it is all jumbled up in order to give them a system all you need to do, you can also make use of certain note cards on which you can give them certain sections sub sections and that will later help you in organizing the entire material of the report.

So, you can also make use of note cards and then while you are making use of note cards please see sometimes it so happens that you are not able to even read your own notes you

write them so small so (Refer Time: 11:29) a hand, you make use of that you are not even able to read your own notes. So, care has to be taken that you not only make use of abbreviations, but whatever you are writing even on the note cards they ought to be very clear very candid. So, that you can when you are going to utilize them and put them and to place them into certain sections you are yourself more clear because that will help you.

Next is once you have done all this later comes the task of organizing the data.

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You have the data as I said while you evaluate the data, by evaluation what I mean is what the amount of data you have got that actually needs to have a sort of validity. So, once you have validated it once you have recorded it separated it then comes the task of organizing the data. Even now when you are culling or collecting the data and then you are distributing again you have created a sort of you know information which is very half hazard.

Now, you have to give them a shape, because the report has to come into a shape and for that what we require is we require a sort of organization and when you organize it is while, while organizing you need to remember that you should create a sort of outline. Now the question is what is outline? This outline is actually a rough structure a tentative design of the entire report, but then just it is in a sum it is very short now when you are making when you are going to make outline you are to see the data that you have you are

now going to separate the data because, in the data in the piece of information you have you will find that there are several sections.

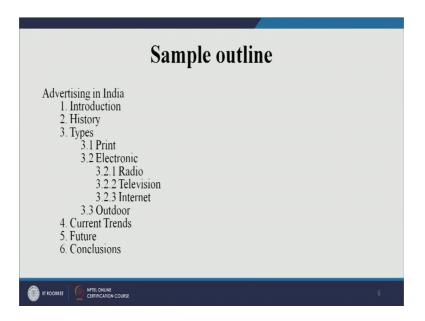
A report is not a say it is on of course, the topic is one, but even in that topic there are several parts and to divide those parts and to give them a certain name for that you need the principles of outline. The principles of outline is just a sort of distribution table which actually tells you which information should go to which section, moreover now when you do that again you have to take into consideration certain things for example, we often say that a report before the report comes into its own being you will find that it is just like a tailor's job.

What a tailor does is a tailor first cuts the cloth into several pieces and having cut it now he decides which one should be the hand which one should be the body part and all. So, finally, he is going to view finally, he is going to stitch it into one hole and then the real thing that comes to you it appears it is as a comprehensive one. So, now, when you have the data before now what you are going to do, you are actually going to follow the principles of outline. What are these principles these principles guide you further how to systematize and for that you need to understand indenting, numbering, coordination, subordination, parallel grammatical construction and then logical ordering.

Now, here you can see how an outline will look like, suppose in an outline you will find there can be a main topic, there can be a main word say a main forage sometimes it maybe a sentence also, depending upon your own privilege and depending upon your own facility. So, the major topic heading will be the first and those topic headings will be further divided, they will be divided into sub heads even in those sub heads you will find that sub heads will be there because if the sub head is further divided and for that you actually need a sort of numbering otherwise you will get lost and the entire data will become a confused lot.

So, here you can see how the major topic heading is there and then it is further divided, but remember when you are going to divide give them numbers though there are several you know ways to number them some people number them as you know in in roman some people number them alphabetically, but then it is always better if you prefer to go by decimal numbering that will help you better.

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Now, let us try to see how a sample outline can be there, suppose the topic of your report is advertising. Of course, whatever maybe the subtitle, but if it is advertising, now the data that you have got and you are going to segregate that data divide the data. So, the first topic maybe advertising in India, now in advertising in India again it will be further divided. So, the first head will be introduction of course, in every report you will find the introduction is a fast thing that we shall discuss when we talk about the structural part after, after this talk,

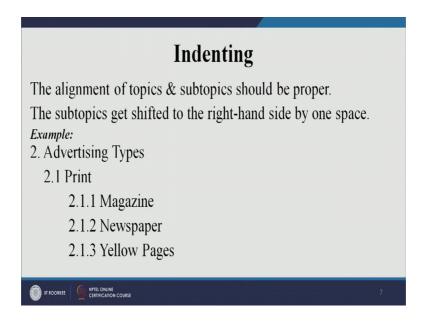
So, now after introduction again history, maybe sometimes we are not going to divide introduction and history, but then when we come to talk about types. In types there may be different types and even when we have further sub divided types, again there can be some other. So, like this suppose it is we have started it by saying by picking by giving it by giving first advertising as number 1 and history as number 2 and then third is types. So, if it is further divided the division should only be sub ordinated with the main topic. So, types and in types we say print and then electronic, further if there is further division in electronic we can say because electronic is part of the third section and in third section 3.2.

So, since it is a further division of the second item of the third topic naturally we will say 3.2.1 and like that I think you will be able to make a sample outline on this basis. Sometimes there are certain sections where you feel that there cannot be any sub

divisions and it is only confined to one paragraph where you think the entire paragraph belongs to the same main topic or whatsoever you need not.

But care should be taken that your divisions should not go beyond the third level, otherwise it will become again it will become very sketchy for you and you will get lost.

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Now, when you indent please do remember that the main topic and the sub topic should have some amount of distance for example, the sub topics will get shifted to the right hand side and the main topic will be towards the left hand side as has been shown here, you can see advertising types this is actually the main topic and the sub topic is print. So, naturally it has come to the, right hand side and again further sub division. So, again we go a bit further to the right hand side in order to ensure and all of them you have to say 2.1, 2.1.1 like this then comes numbering.

As I said earlier when you are going to number it please see that the first topic had whether it has got any division or sub division, if it does not have any sub division please confine it to only one, but if there are sub divisions you have your own choice you can divide it in alphabets.

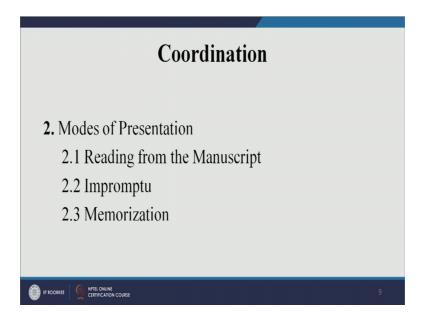
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And if you feel that you do not want to go with alphabets you simply want to go with roman numbers you can go your most welcome, but again if you follow alphabets and if the first alphabet is in the capital.

So, further sub division if you want let it be the in this small ones. So, instead of making too much of (Refer Time: 20:27) it is better from my point of view that we should follow the decimal numbering because it helps in avoiding a lot of confusion, after numbering what we need to see is that coordination is very important say for example.

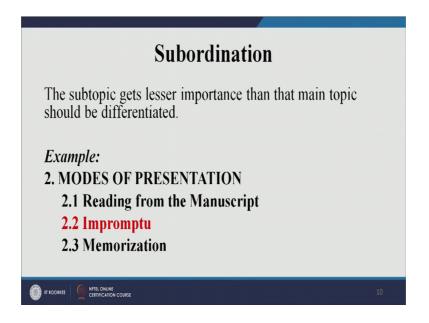
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The main head is modes of presentation and we know that there are further sub divisions in modes of presentation like reading from the manuscript impromptu memorization.

Meaning thereby reading from the manuscript is actually a sub division of the presentation and while it is sub division you cannot provide some new knowledge, I mean it is going to talk about only the modes of presentation and these 3 they are actually the divisions they are actually the types of the presentation the modes of the presentation no new knowledge should creep in here that is what I mean by coordination. I mean the main head and the sub head should have a sort of (Refer Time: 21:32) with each other should have a sort of coherence with each other that is how it can move further, next to that its subordination.

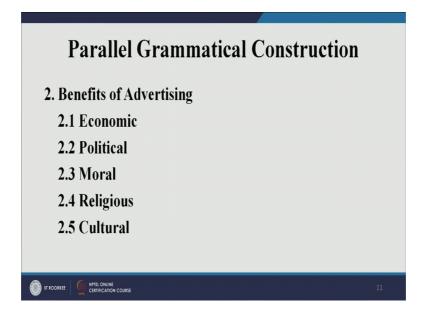
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Again in subordination you will find there ought to be some amount of difference here you can find the modes of presentation is written is in involved and then the sub heads they are written in small letters or in normal phones. So, you, you should follow that you can find that if modes of presentation here you cannot say reading presentation something like that. So, presentation itself is the head. So, what are the further servers that should be there, the sub topics often gets less importance than the main topic and it should show the sort of difference which actually lies when we are subordinating.

Next is while you are making an outline also please ensure and not only in outline when when you make table of contents as we will discuss when we talk about structure you will see that parallel grammatical constructions should be used.

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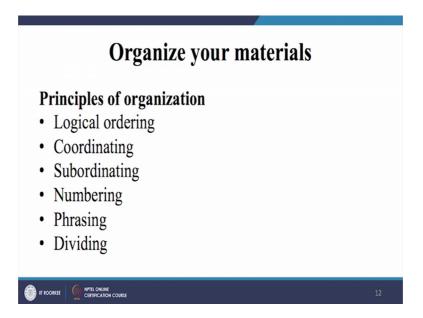


Now, what exactly do we mean by parallel grammatical construction? Suppose the main word or the main topic is a fridge, suppose if it is a fridge suppose the main word is a noun, naturally when you are going to divide it.

So, all the other words they should have a sort of parallelism here you can see benefits of advertising, suppose this is this is actually the main topic and now in benefits we we say economic political moral religious cultural. So, what you will see is we have followed the adjective pattern, even though it is benefits of advertising that is actually division and in that division the words that follow here we cannot say economize or we cannot say moralize like this.

So, if you follow the noun format you should follow the noun format, if you go by verb format please follow the verb format that is what we mean by parallel grammatical construction. You know if you put something else in place of suppose in in the in the second sub heads it is political, but you say politics naturally it will be an odd word out. So, hence care ought to be taken that you follow the parallel grammatical construction when you are making a sort of outline.

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Once you have outlined once you have made an outline, now you need to organize your materials and when you organize first is there are certain principles of organization of the entire dat, principles of organization the logical ordering, by logical ordering we mean as a report is a systematic writing we have been saying that it is a systematic writing. So, you have to follow that systematic form and that can only be followed when you follow a logical ordering, by logical ordering we mean what should come first what should come second.

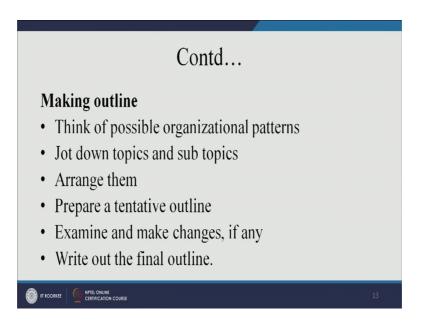
In shorter reports you will find they start with the beginning and and in other reports also, but it is for the report writer to have a liberty whether he starts from recommendation or he starts from the introduction. But, remember whatever you are following you should stick to that it is not that you will follow recommendation and then you start discussion and then conclusion will be after the second one no this should not be done all is that you should follow the logical ordering.

So, it should be logically arranged then it should be coordinating, subordinating and then numbering we have talked about how you will go with the decimal numbering and then phrasing this is also very important. You cannot when you are making an outline and when you are organizing your data you cannot write the complete sentence, otherwise what is the use of making notes you will either follow a format where you will use a

phrase for example, benefits of advertising like that we will say side effects of pollution, like that ill effects of smoking fine like this.

So, these are all phrasings and when you have done that phrasing and the words that follow it should either if it is a phrase it should also be a phrase. Now if it is a noun it should again be a noun in the further sub divisions and then dividing now when you are going to make an outline you should follow as I said a possible organizational pattern.

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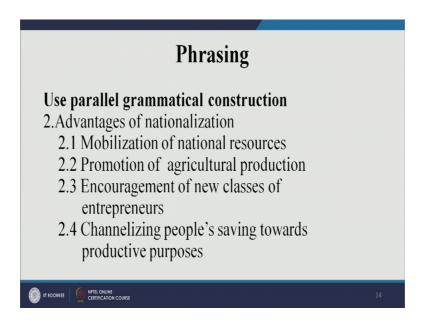
So, whether you will begin with the recommendation or you will be sorry you will begin with the last or you will begin with the first.

But most of us we actually want that things should begin with a first meaning thereby from introduction, after introduction then we will go for the historical background, go for the discussion, than conclusion than recommendation than bibliog like that. So, it will become more clear when we talk about a structure and then you have to while you are making notes please be careful that you are going to jot down both the topics and the sub topics and all these topics and the sub topics will be later divided into main topics and sub topics and then further by giving numbering and while you will arrange them you will yourself because you know as an intelligent guy you will yourself know how you can bring a sort of logical ordering.

Ah maybe at times the outline which you are going to prepare will be attentive 1 when when because that is actually a guide that helps you that reminds you when you are putting the entire material, you have the material with you when you are putting the entire material it is once again the outline that will help you it will remind you, whether you have left something or whether you feel that some piece of information which was to be in one part has by mistake gone to the other part. So, it serves as a guide and then you can of course, you can examine you are the sole authority of writing the report

So, you can make certain changes if any and once you have done that even when you have you know, it is said that if you have been able to prepare the right outline you are able to write the right report rather because outline is a sort of structure which it has provided you. Structure in terms of information, structure note in terms of the real structure, but structure in terms of the information or the data which you have and once you have that once the outline is ready half your job is done.

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Next comes the phrasing as I said we have already discussed that parallel grammatical constructions will be used for example, here you can see advantages of nationalization. Now here you will see this is actually a phrase and all the other parts which are there we say advantages of nationalization this nationalization and the advantages both are nouns. So, here when they are going to sub divide it what they have done is mobilization of national resources, again you find mobilization is a noun. In the second one they say

promotion of agricultural production fine they do not say to promote, you know what sometimes happen is some people because they are not used to they are not acquainted with, what they do is they actually write in the first one they will write mobilization in the second they will write to promote the third they will write encouragement and the fourth they will write to channelize.

You see when we are talking of a report we should see that report follows a system and and this system right from the beginning has to be kept into consideration when you are going to write the report. Friends you see if you follow the principles of outline and of organizing the data I think you are very near because now you have the data and you have also segregated the data. Now you have to understand how you are going to (Refer Time: 30:28) it how you are going to view it and for that you actually require to understand what are the structures and we are going to talk about the structures in the next lecture where you will feel by providing a neat structure how you can let the mansion of report grow and how you can feel that once you have got the information which is spread out. And now you are going to even from the even on the basis of the outline you are going to put them into their real positions. So, that when the final thing appears. So, that when the out when, when, when it is in its outcome you will find a report has finally, evolved.

A report I will repeat once again is the tangible product of a professional and every professional needs to know how to write a report. We have talked about these, we have talked about the evaluation of data we have also talked about the organization of the data and the creation of the outline. Now we are ready to know what can be the structural parts of the report because the building cannot come all of a sudden the building actually requires foundation.

So, in the next lecture that follows we will talk about the foundation or the structure or the anatomy of the report.

Thank you very much.