Research Writing

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Lecture - 06

Reading Research Documents

Welcome back to the MOOC course on Research Writing. My name is Aradhna Malik and I am helping you with this course and we have been discussing what research writing is, we talked about what how you read research documents. So, in the previous class we talked about finding out what to read, now in this class we will discuss some more as to what you do with what you have found to read.

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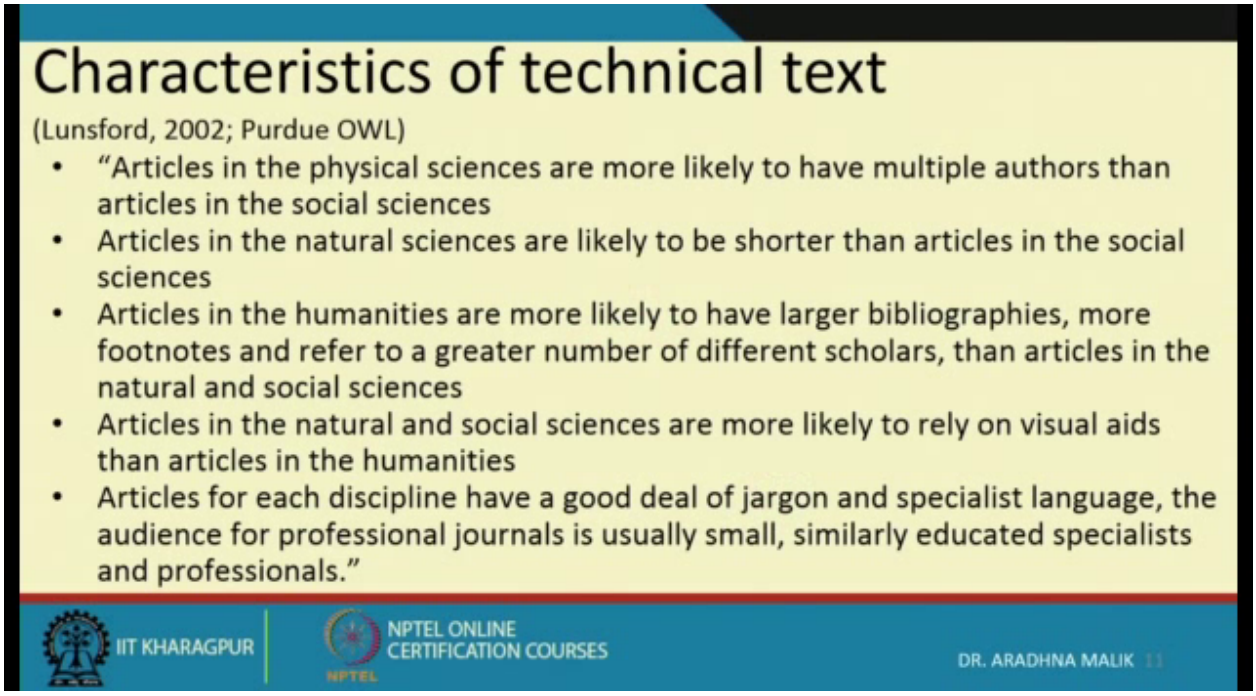

So, let us see what we have here for you now. When we start reading we start looking at the technical text we look at research papers, especially with reference to research papers

some characteristics of technical text are - one the articles in the physical sciences are more likely to have multiple authors than articles in the social sciences.

So, in the physical sciences typically it is a lab situation and people are usually working together in teams and therefore, the number of people who jointly create a piece of knowledge is more, so the articles contain number of authors whereas, in the social sciences it is usually a 1 2 or 3 person effort.

Articles in the natural sciences are likely to be shorter than articles in the social sciences. Now, when we talk about articles in the social sciences we are talking about we start with finding out what has been studied before and the gaps are not that the, gaps finding out the gaps requires an extensive study of literature which may be found in a variety of places with the result the literature review section is much larger much more complex, much more diverse, than the literature review section in the natural sciences.

In the natural sciences experimentation the actual activity takes up a lot of place. Now I am not that does not go to say that the articles in the social sciences do not dwell upon the actual knowledge creation, but the proportion of a study of the existing knowledge base and what one has done to connect it to the or the extension that one has carried out of the extension of the existing knowledge base is much is very different from this proportion in the natural sciences then articles in the humanities are more likely to have larger bibliographies more footnotes and refer to a greater number of different scholars than articles in the natural and social sciences.

Articles in the natural and social sciences are more likely to rely on visual aids than articles in the humanities. Humanities talk about more more about what is it end. So, the visual aids that are available to scholars in the humanities are much lesser than the scholars in the natural or physical or natural sciences of physical sciences or in the social sciences. Then articles for each discipline have a good deal of jargon and specialist language the audience for professional journals is usually small similarly educated specialists and professionals. So, the articles for each discipline have a good deal of jargon and specialist language, the audience for professional channel is usually small similarly educated specialists and professionals exist in the specialized area. So, the number of people we are going to read whatever you have written is usually very is

usually very very less as compared to the number of people who will read what you have written in magazines for example, so in scholarly journals the audience is much lesser.

How do you identify structural elements of technical documents? What you see in technical documents typically?

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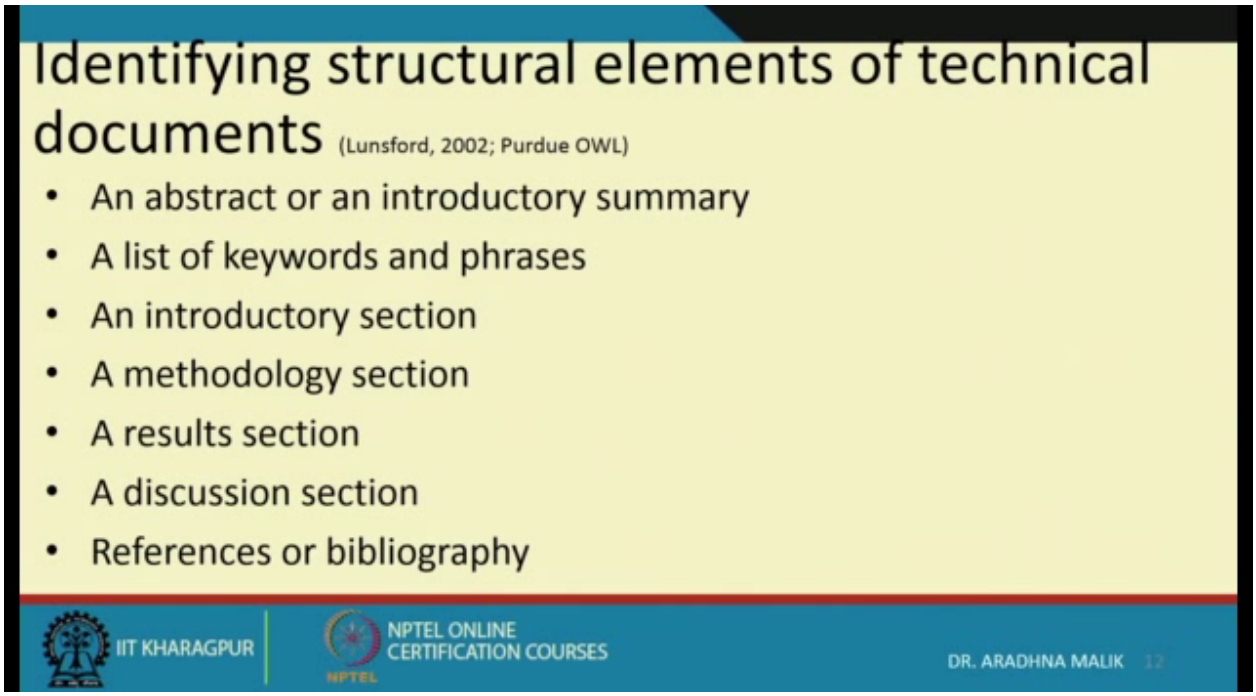

An abstract or an introductory summary. You see a list of keywords and phrases, you see an introductory section that talks about what is to come. So, the abstract appears before the article actually starts and then the introduction is there that introduces you to what is going to be dealt with in the paper. Then you have a methods section, typically the literature review a review of the existing knowledge base will be included in the introductory section. Then you have a methodology section, now methodology is not methods we typically interchange the two, we use these two terms interchangeably methods and methodology are different methodology by definition is a study of the methods and the process of selection of the method that is most appropriate for study of the problem that is that we are studying.

So, a methodology section a results section a results section will be the, this will be the section in which the output of the method that you have carried out will be listed as to you know this is what we found. Then there will be a discussion section. So, the results

are then understood in terms of existing literature in terms of the understanding of the knowledge base that one is dealing with. And references and bibliography, so the work that have been referred to within the text are then detailed at the end of the document, so a detailed bibliography with the complete sourcing of the material that has been used in the paper is then brought out or is there presented at the end of the paper.

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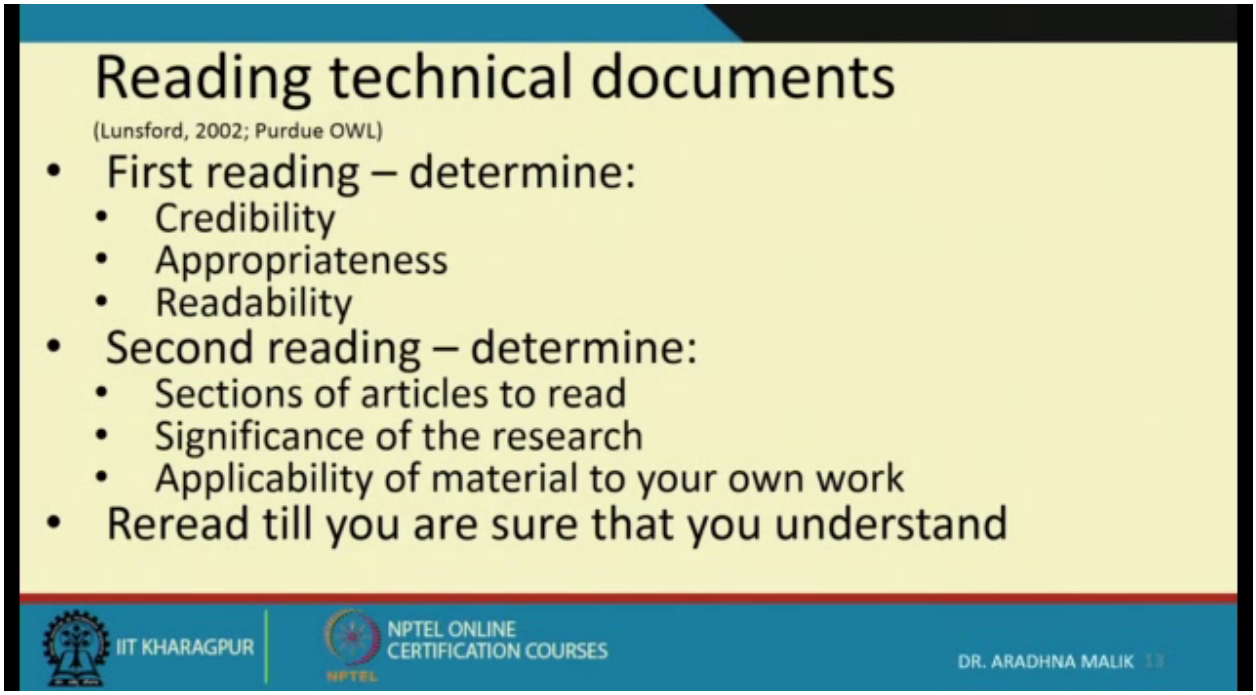

Now, how do you read technical documents? In the first reading you should determine credibility. Is the article believable? Is the article is the authors point of view believable? What is the author trying to say? Why is the author trying to say it?

Then the appropriateness, should I be reading this article and I will tell you what an annotated bibliography; is how do you keep records is the article appropriate to what I am trying to study, is it is there a fit between what I want to find out and what the article is saying. So, the first reading just find out whether the findings are believable, they are credible and whether the article is appropriate and whether the article is readable which means that many times you will come across articles that are written in such difficult language that it becomes impossible to understand them. I am not saying that you should discard such articles all I am saying is that if the article is really critical in view of the above these two difficult jargon. When we talk about readability we are talking about

jargon, we are also talking about presentation, we are talking about grammar, we are talking about the physical look and feel of the article. So, all of those things need to be considered are you really understanding what is being said in the article is what you need to determine. So, that is what you do in the first reading.

Then in the second reading you should determine sections of the article to read. You have gone through the article you have a general sense of what the article is saying then you select the sections that you would like to focus more on. Maybe you are reading an article to find out what kinds of method have been used. Maybe you are reading the article to find out what kinds of analysis, analysis have been used to arrive at a conclusion. Maybe you are trying to find out what kind of literature has been referred to. Maybe you are only interested in the outcome. Maybe you are only interested in the limitations that people or that researchers faced.

Now, critical attention should be paid to the limitations because that is where the gaps really emerge. Then significance of the research, in the second reading you should find out what the significance of the research is, why was this research and taken in the first place why did the author or why did the researcher actually embark on this project. And the applicability of the material to your own work, you will say what is appropriateness appropriateness only indicates a fit.

In the second reading find out how this fit is really materializing, what is the author saying that helps you or that addresses the question that you are trying to ask. So, what is the author saying that helps you answer the question that you are attempting to answer or that informs you about the area that you are venturing into. So, how does this article apply to your own work?

And then you keep reading the article till you are sure you understand. Now, you will say this is a very very tough job. Reading an article is the first step to writing an article, unless you know how research articles in your specific discipline are written you cannot write them. If you do not write articles you will not be able to succeed in the academic world. So, if you are interested in research writing which is why I assume you have taken on this course then it is imperative for you it is essential for you to know how to read these technical documents.

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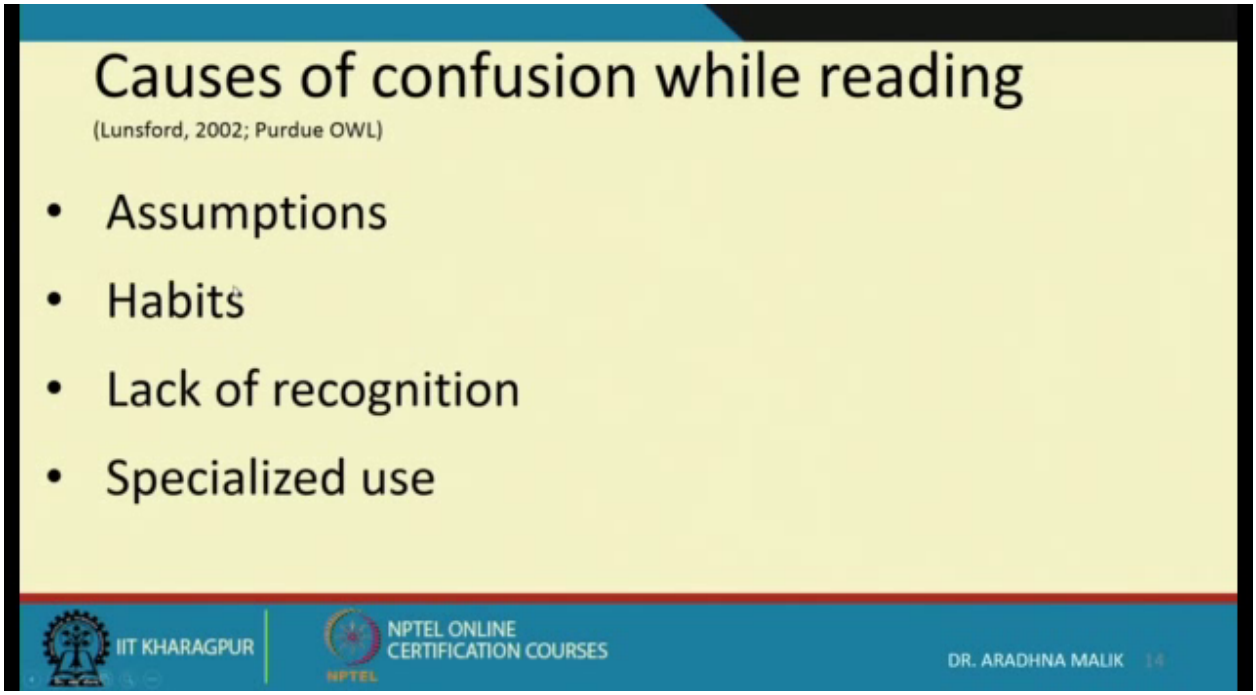

Now, causes of confusion while reading articles, what do we get confused about or what causes the confusion when we are reading articles. The first one is assumptions we think we start reading with certain ideas in mind I read the title of the article and I say this is what the article should be answering, as certain assumptions about the area the article is talking about. So, that can interfere with my ability to understand what is written in the article.

Then habits, many times we have the habit of skimming through the or we have the habit of reading just the first line or the first sentence in a paragraph and the last sentence and we think we have understood whatever is written or we only read certain sections and we completely skip the rest of the sections that will not help you or sometimes we get so bogged down the conversely you could just keep focusing on the nitty gritties on the jargon and you keep trying to understand what is difficult word means and in the process lose track of the overall picture that is being presented by the article. So, that can really cause a problem for you.

Lack of recognition. So, you know many times we do not recognize the words that are used and that can cause a confusion in our mind we think, there is too much jargon, there is too much you know too many difficult words so many technical terms in the article that we do not want to pay attention to and that can cause confusion while reading. And specialized use, specialized applications of the article, these things can confuse you;

however, these can be addressed. And you know you must question your assumptions you could so find out why you are assuming what you are assuming you could maybe relook your habit or you could you could revisit your habits and see what you can do to change them or to adapt them to the situation at hand. You could improve your recognition by reading similar articles or several articles along similar lines and you could familiarize yourself with the jargon that is being used. So, these are some solutions to this confusions.

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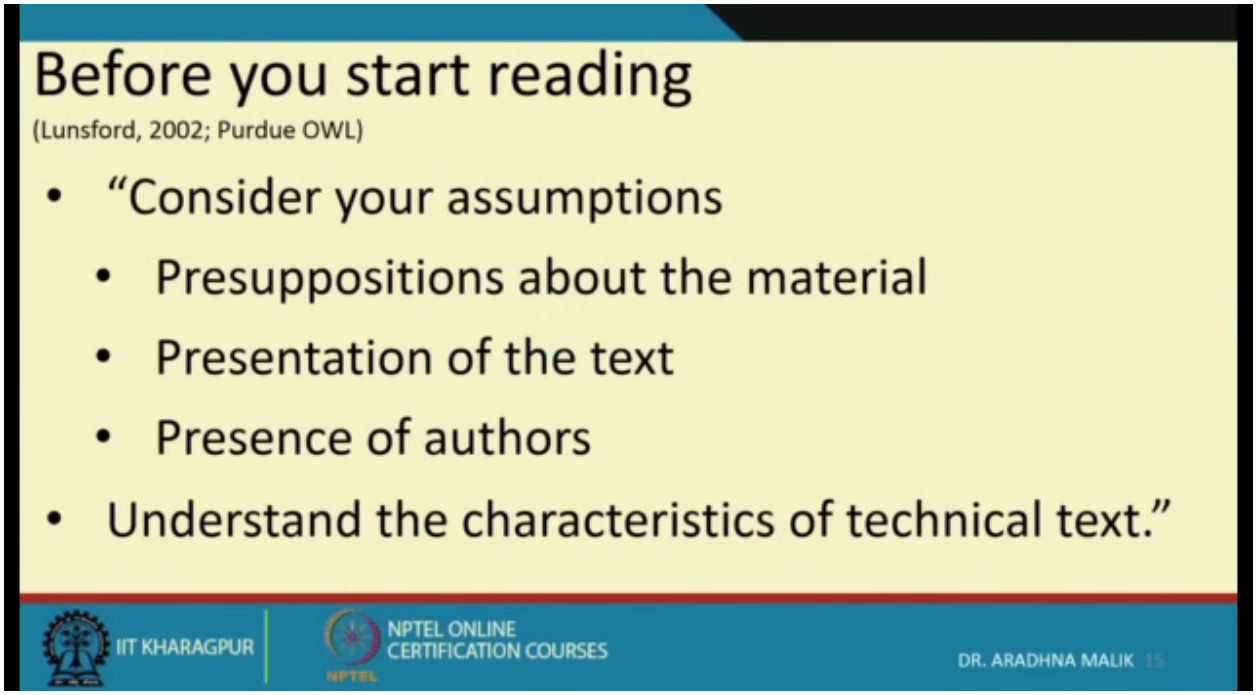

Now, before you start reading first thing to do is consider your assumptions. What am I assuming? What am I thinking about? So, that is what you need to do.

Now, I was having a discussion with one of my research scholars this morning and he said that I am assuming that the author would know about the nitty gritty of the industry that I am talking about. Now, that assumption is very good. So, you know, when the author is writing something or when you are trying to read something you are assuming that something that you are expecting will come out of the paper. So, you must consider your assumptions, what am I assuming? Am I assuming that the author of the paper has written this from the perspective of an expert in a particular industry? Am I assuming

that the author knows how this paper will apply to a diversity of knowledge bases? So, you have to question your assumptions what am I assuming will come out of this paper.

Presuppositions about the material you must find out what your presupposing about the material, if there is this the quantitative there is a quantitative study you could be you could be assuming that some kind of a predictive result will come out of it. Quantitative study is very often talk about or (Refer Time: 13:11) try to forecast what could happen try to predict what could happen or they try to generalize. But occasionally you could find studies that are not productive in nature. So, what are you presupposing about the material.

Presentation of the text, see how the text is presented. The font size the font color the quality of paper all of these have an impact on how you or whether you want to read an article or not whether you want to pay attention to an article or not. So, how the text is presented where are the tables. Many times authors will say refer to table 1 and then they will go on describing what is in table 1 and you will find table 1 at a place where another discussion is going on. So, that is what we mean by presentation of the text. Are these things coherent it? Is the reading smooth are you jumping? Is the transition between the different concepts smooth or is the transition you know are you jumping from one concept to another without really making logical connections. Now, that is something that you need to see, presentation of the text, organization of the text needs to be looked at.

And the presence of authors, who are the authors? What are where are they coming from? What are their affiliations and do they have reputations for accurate reporting or not? What are their qualifications? All of that will make a difference to what you eventually get down to reading and how much you understand from it. And then you try and understand the characteristics of technical text.

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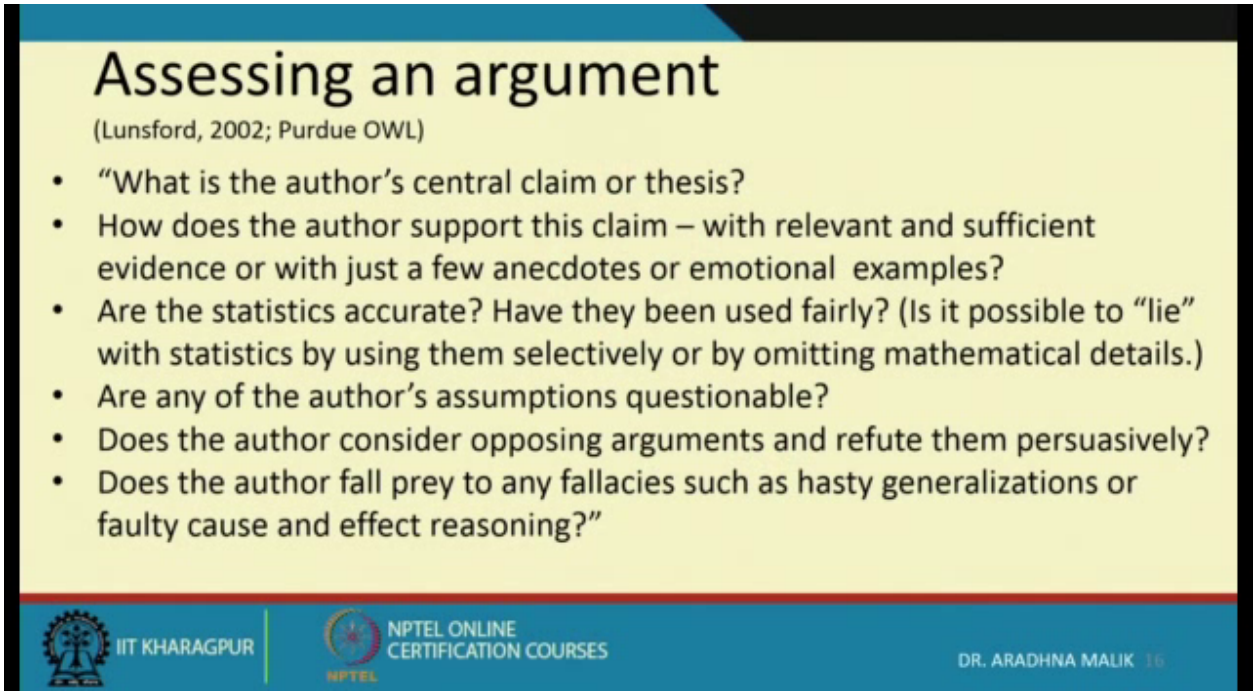

Now, how do you assess an argument? Try to find out what your authors central claim or thesis is, what is the author trying to say. What is the author talking about? How does the author support this claim? Does the author support this claim with relevant and sufficient evidence or with just a few anecdotes or emotional examples?

If the authors reasoning is based on sound logic on numbers on previously published work then you might want to believe it, otherwise if the author says an eminent for example, of statement like an eminent researcher so and so said the same. So, it must be believed; would you believe it, you may never have heard about it. To give you an example I will not name the scientist that we were referring to, but in my final dissertation I wrote a sentence saying that an eminent researchers so and so; you know according to the eminent researchers so and so this is how things should be. And my guide Professor Frank Dance of the University of Denver told he questioned it and he said who says that this person is eminent.

Now, that was because Professor Dance himself is one of the most accomplished, most well known researchers in the field of speech communications. So, somebody who I thought was very very renowned and very accomplished and very well known was Professor Dance's contemporary. And so, he said you know we are contemporary we know each other by our first name. So, I am just as accomplished as he is. And we had a hearty laugh over that, but that made me questions my assumptions, what am I saying,

from whose perspective how my you know I cannot guess the person I am talking about maybe very accomplished the researchers whose name I am putting in my dissertation maybe very accomplished; however, just the persons only the persons public reputation cannot be a reason for anyone or professional reputation cannot be the sole reason for anyone to believe whatever I am saying is true.

So, that has to be backed with examples from the persons work. So, we say so and so who proposed this theory which is you know which relates to my work in so and so manner, then that statement does not even need the word accomplished. That statement does not even need inflated words and phrases to qualify it. So, how do you, how does the author support the claim? That is of utmost importance. Are the statistics accurate? Have they been used fairly? Is it possible to lie with statistics by using them selectively or by omitting mathematical details? So, you have to see how the statistic have been used, how they been presented, how they been interpreted. Are any of the author's assumptions questionable? So, you also look at what the author has assumed and see whether you believe what the author has assumed, whether whatever the author has assumed is believable or not. Does the author consider opposing arguments and refute them persuasively? How well or how in you know whether the author treats the opposing sides in a balanced manner. I think we discussed this in the previous class also.

Does the author fall prey to any fallacies such as hasty generalizations or faulty cause and effect reasoning? So, does the author make these mistakes? And so this is how we assess an argument, this is how we start reading a document. Now, we will have some more inputs for you about reading in the upcoming classes and there will be you know whenever they are relevant they will be addressed, but this is all we have time for in this class.

Thank you very much for listening.