IIT Madras
BSc Degree

English -II (Advance English)

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Writing Lab Report

Welcome again to this session of report writing. In an earlier session, we have already spoken about some work in a laboratory and how a written manual helps anyone; an experienced worker, researcher or scientist, a manager or not such an experienced worker do an equally good job. It's also partly because this achievement of course, is there in a great measure due to the fact that the process of using a laboratory and how to use it for a specific purpose is written down leaving nothing to guesswork, causing no confusion.

But after the work is done, after the experiment or the routine production, routine checking, after the work is done in the laboratory, actually the work does not end there. All work in laboratory is followed by a report. The laboratory may be rich, the laboratory may be poor, the laboratory may be big or small; it may be the laboratory of a science teaching college or a workshop of an engineering teaching college or as large a laboratory as France maintains on behalf of its national institution for scientific research, CERN or facilities like a National Aeronautics and Space Administration, NASA or Hubbell Lab, in the USA, they are very, very large laboratory, hundreds of thousands of people work there, and they have mega projects going on for decades, and they have huge questions to ask and answers are equally huge.

Regardless of the size, regardless of the budget, regardless of the number of people that work there, all laboratories are used according to a very clearly precisely stated procedure following the manual; what you do now, what you do next. Whether trivial, whether a small or a big piece; whether it is turning a screw in a nut, whether it is boiling water, whatever it is or be it a school laboratory, hardly anything new.

The purpose of a school laboratory is, or they have two purposes. Number 1, they want to demonstrate some scientific truths. Water, does water boil at the temperature of 100 degrees centigrade? Let us see. And there is an experiment, school students do it or do water evaporate in the sunlight? You soak a piece of paper, leave it in the sunlight for some time,

and you come after some time, you find that the water has disappeared, evaporated. How long will it take for a paper to go dry? Well, physicists, scientists tell us that depends upon several factors, including the intensity of sunlight, including the size of water, including how much water it has taken, and in including where it has been kept under the sun.

So, no matter how big or how small, whether it is a school laboratory or a big research industrial research laboratory, whether it be physics or chemistry, whether it is kitchen or NASA, no matter where it is, there is a set procedure and, just as there is a set procedure there also are expected results. And that is why all projects all experiments in all laboratories have two kinds of writing. One before, what is sought out to be done and how it is done or how it can be done, that is called manual.

It can be fieldwork by a social scientist by a manager by your management studies researcher; or it can be a simulated process in a computer laboratory, it is an experiment. And all experiments number two, are followed by a written report. What was done? How it was done? Whether the project became successful? Whether the experiment provided the result that was expected or whether it gave a different result? Or it failed simply; it must be recorded so that other researchers, other workers in the laboratory learn from these experiments. How are the reports written? In this session, we are going to speak about how reports are written. Go next.

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You see, big or small, on my right hand is a section of a lab called the Central European Collider Lab. On my left hand, is a school laboratory regardless of size, regardless of the number of people working they are both laboratories and they both do certain things following a certain stated well-articulated procedure and they expect certain kinds of results which can be recorded, verified, checked if the report is, if such an experiment is possible or it is not possible.

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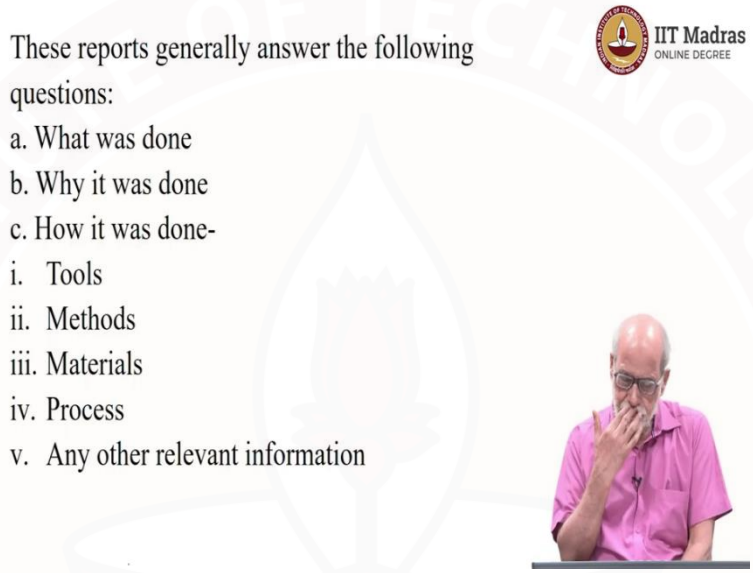

Next. What-what does a report generally include? We saw a manual earlier laboratory manual; the manual tells you about what in a general manner. It tells you about tools, about time, about duration, about sequence. A report is an actual something, is a recording of, is a video recording of, is an audio of, is a recording of something that was tried something that was done in the laboratory.

So, a report is not abstract, a report is concrete, it is specific; it describes, it does not discuss. It can discuss results, but usually it describes what has happened. And it writes that in and impersonal language. In a language that is not as specific to a person or a place. What do these reports contain? What is the language of these reports? These reports generally answer the following questions. Look at the slides. Go next.

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Go Next. We are going to describe how tea is made. But before that, let us look at the history of tea and tea making. You see a tea garden.

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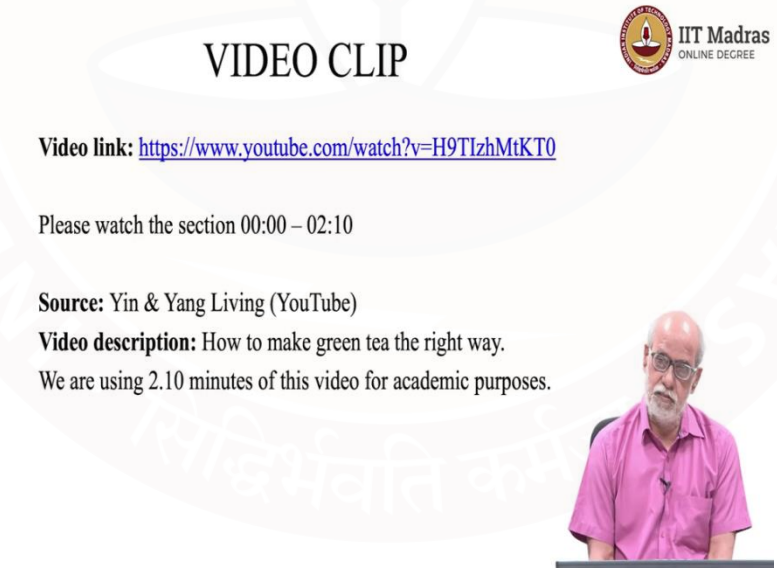

Watch this video. See how some wonderful tea, how Chinese make tea or how Southeast Asians, Koreans, Japanese. How do our brothers and friends in these countries take tea? Well, you see, Asia has an old tradition of making and offering tea, but there are little local differences. The way it is made in China is slightly different from the way tea is made in India and in other countries.

Say, for example, in India, lots of us add milk and sugar to tea, and some of us also boil our tea leaves. Again, some people take spice tea, so we add ginger, we add some Tulsi plants, Tulsi leaves and that sort of thing. In Europe, mostly, people take it, as we saw in this demonstration, but a lot of people believe that the best tea can be had the most traditional manner that is, as we saw in an earlier session on this course when we were talking about writing your manual. So, we will follow that method and we will write our report describing that method. Perhaps, you can make yourself a cup of tea, following that method once again, and then it will be easier for you to write a report. Here we go.

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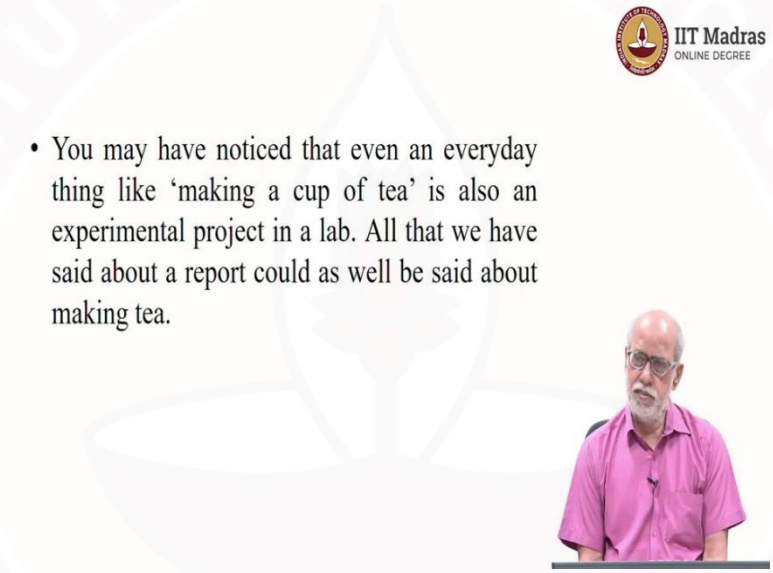

Of course, making the tea is as experimental project as any other. Every time either we demonstrate the truth of a natural phenomenon or we are trying out things, if we put this way, how is it going to go? if we put that, way how is it going to go? So, keeping all that apart, we will do it; we will describe the simplest possible way, the simplest possible method of making tea. Next.

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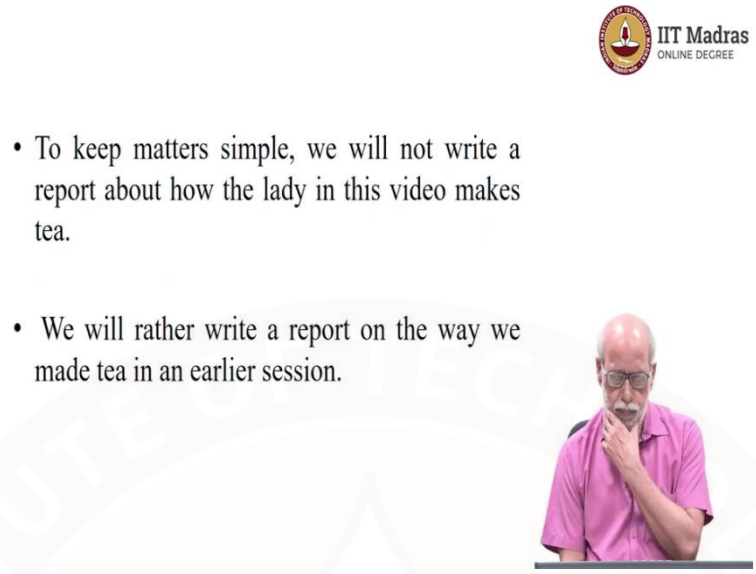

That is why, we will not describe what we saw in the video recording earlier, we will describe rather, we will describe the way we decided to write the manual in an earlier session. And here it goes. Next.

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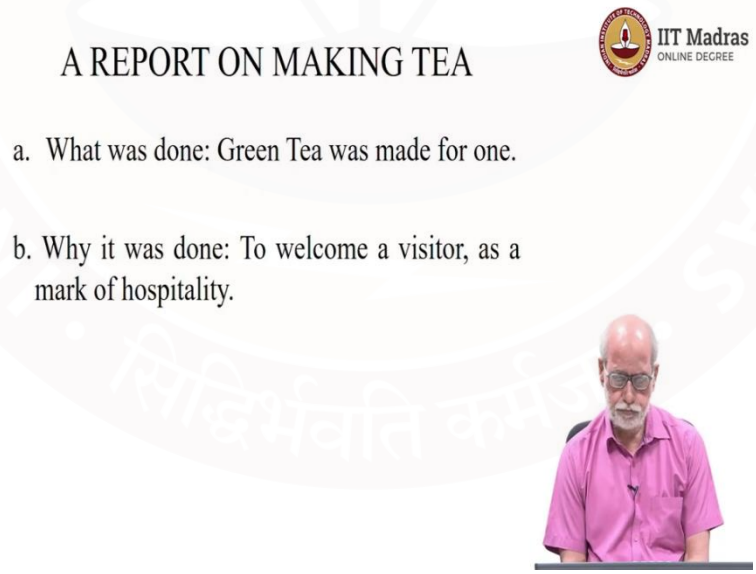

Here is our report on making tea. What was done? We made green tea. For how many? For one only. Why did we do that? What was the purpose? Were we checking whether water boils? Were we checking whether the tea leaves survived those temperatures? No, we made tea to welcome a visitor as a mark of hospitality.

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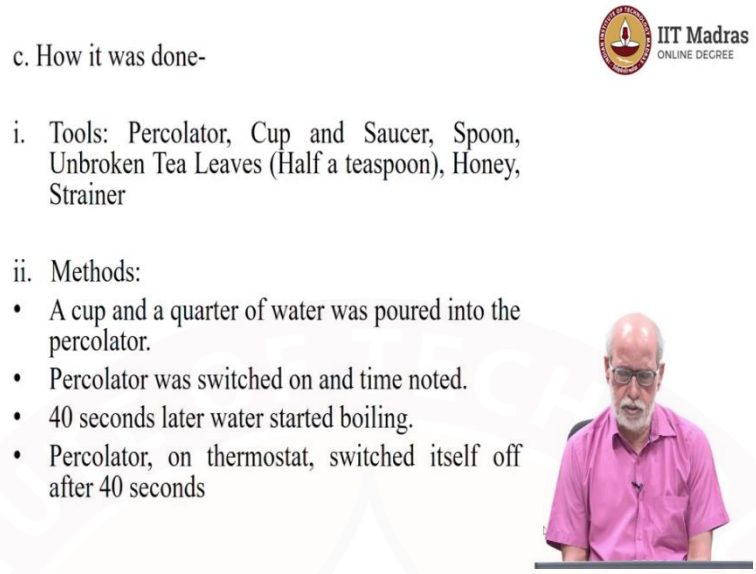

So, these are the things we need to make tea, and to take tea, of course. A percolator to boil water. Traditionally, it used to be a kettle, a pan. For a long time, a kettle remained very popular, but a lot of people these days also use a pan easier to clean. But, as far as boiling is concerned, a kettle is a better way of boiling water. So, cup and saucer small teaspoon, then unbroken tea leaves, half a teaspoon.

This is very important that you should have unbroken tea leaves if you want to get very good quality tea, and honey, maybe one teaspoonful and a strainer. So, these are the materials. So, if you are the one who takes sugar and milk, then you can to your taste; you can also add that to the list. Some people in India take lime or lemon you can also add that, or some other people still some other people prefer tasting tea with ginger with other spices with pepper, you can suit your taste, but ordinary standard tea and traditional tea has been done this way.

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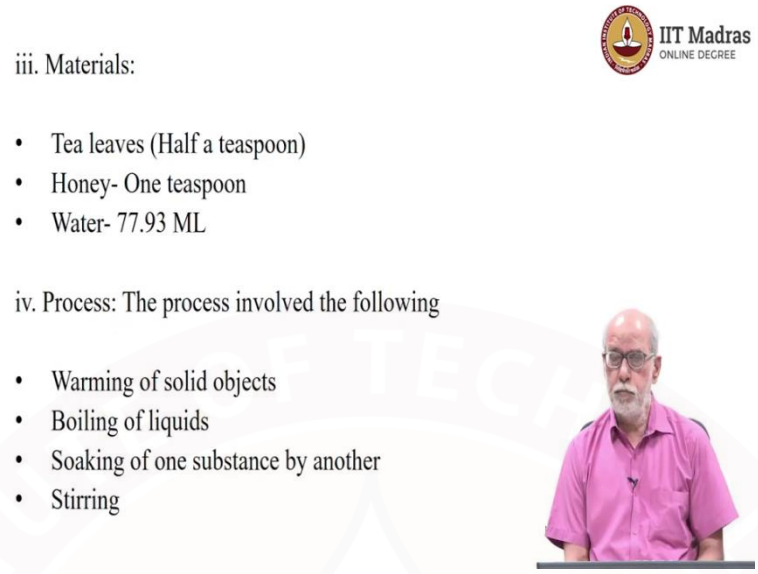

Here we go. Method, take a look. What materials were used other than tools? Actually, we could also have written this section before the process or procedure. So, we could have said this entire thing can come before, but it can also come afterwards because it is a report and the report follows work, does not precede work. If it precedes work, then it is a manual; if it follows work, then it is a report.

So, we are writing a report, not a manual; therefore, it is alright if you also have it at the end of the work. So, what materials do we need to make a good cup of tea? Here is the answer. Tea leaves, honey and water, to be exact. Actually, you do not need more than 75 milliliters of water, but having 2 or 3 milliliters more, helps you save your percolator. Actually, you should not strain all the water away; percolators should have some water still remaining there; otherwise, chances are that the percolator surface, the plate might burn under its own heat. Therefore, a lot of experienced people who like making good tea put a little more water. So, actually 70 liters, 70 milliliters of water should be all right, but I have said at almost another 7.93 so that there is enough water in the pot.

Now, how do you do it? What is the process? Because how do you do it has two parts. Number 1, what tools what materials we use; and then second, what methods or process you use. So, let us now talk about the process. The process involved the following: we warmed some solid objects not made them so hot that they would become untouchable, but they would become hot enough so that when tea comes from a very hot medium, it does not go into suddenly into a very cold medium; then it might lose its flavor. So, warming of solid

objects like cup and saucer, then boiling of liquids. In water, if you add honey and you want to boil it, you can do that too, but I don't know. I suppose that may not be a good process. Soaking up one substance by another, then this is the third part and finally stirring. You add honey, and you stir it so that it gets mixed in the tea you made for yourself, and you get the best of it.

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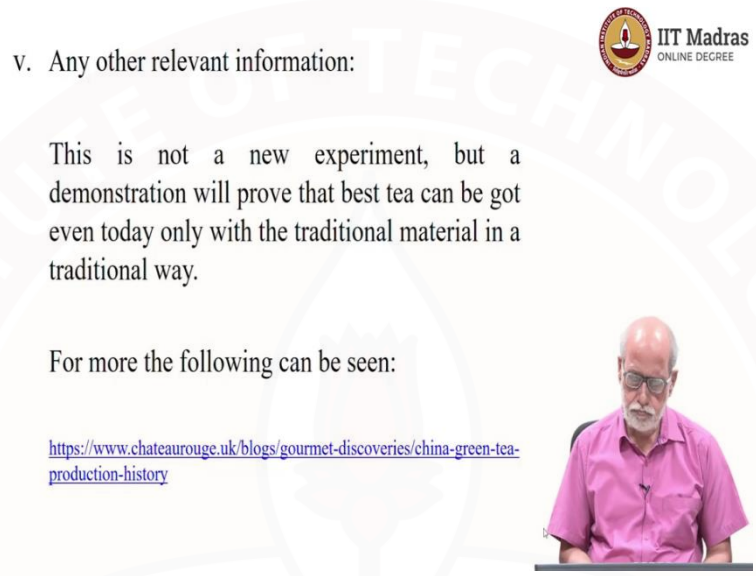

Next. Well, you see, there are books and reports and manuals on tea making you can look them up; but our tea, the one that we described just now is not entirely traditional either. We are adding something else than tea leaves to water, we are adding honey. Some people in India add lots of other things. They add sugar, they add milk, they add ginger, they add some other leaves, Tulsi leaves etc., etc., so that tea is different.

Well, it has, even that he has a similar effect that is the effect of recharging you, refreshing you. Your blood starts circulating once again, and you feel better. If you want to know more about how to make tea or how to make better tea, there are books and there are a lot of literature you can look some of them, look at some of them, we are giving you the link to one.

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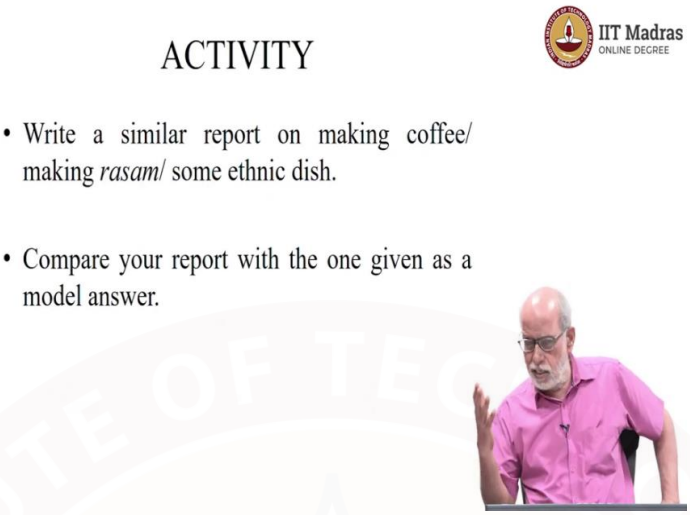

Next. Now, as I have been saying, so the best way of learning to write, learning to speak, learning to do things is to do it yourself. So, I would advise that you should write a similar report on making coffee, black coffee, making black coffee. Or, if you do not like that, if you are not the one who drinks tea or coffee, then you can write about making Rasam. A lot of families in South India make prepare Rasam every, for every meal. Particularly for lunch and dinner, but many other parts of India have Rasam only occasionally, and that is under the influence of South India.

But if you do not know much about that, it does not matter. You can take up some ethnic dish, something you do in Vietnam or something which is exclusive to Nigeria or Kenya or Gabon or Senegal it does not matter or to Andaman or to a pocket in India. Because each culture, just as each culture has its own language, its own rituals, its own problems and privileges, each culture also has its own way of cooking.

But no matter what you cook, according to which culture or what item, a report can still follow the same structure and have the same structure. What is that namely? What is done? How it is done? What are the tools and methods and materials, etc., etc. What was expected? What Happened? We did not tell you that the tea is ready to drink when it changes color. From plain watery, it becomes greenish-yellow or greenish-red, and that is perhaps the best tea.

So, do some other things and write a similar report. You will notice that the language of the report is pretty straightforward, no complication. Nearly all sentences are simple sentences,

but they are all in passive voice and in the past tense. You can also write in the present tense, that doesn't matter; but it should be in the passive voice. The reason is, why do we write it in the passive voice? The reason is, these experiments and that is what makes them experiment can be replicated regardless by anyone, regardless of who does it. The claim is, if you follow this process, if you follow this procedure, if you use these materials, and if you have these tools, then results are totally, totally likely to be as we said here.

You might, some of us might think come on, I have not joined this course to learn how to make tea and how to write about it, but my dear friends we are not learning how to make tea or how to write a report about making tea only, we are also learning that. We are at the same time learning how to write about things we do every day and we take them for granted.

Because learning is an attitude, and the chances, the occasions, the opportunities are all around you, if you take care and if you look around. Thank you very much. Have a good luck.