IIT Madras
BSc Degree

(Refer Slide Time: 00:14)

WRITING

Welcome to this the next session of a unit in writing module. Today we begin our section in what we call writing about quantitative data or turning numerical data into verbal data or turning a numbers thing into a words thing. Many people say from visual to verbal where words are involved.

- Those in engineering, management and other disciplines frequently write about statistical data.

- These data may come in the form of bar charts, histograms, graphs, pie charts, and other kinds of statistical tables.

Why do we write this way? And if you ask yourself why we write this way the answer is pretty obvious to say for example those in engineering or in management and other related disciplines frequently write about statistical data, frequently write with statistical data using a statistical data. They can share by statistical data because it is perceived that these data are much more objective than merely word data.

It is possible to say that I live in a very comfortable place. What is comfortable? But if you say though this is the month of December, I live at a place with 22 degrees temperature. You do not have to use the word comfortable. Everyone gets the meaning that this is a comfortable situation. When it is so cold then living at a place which is about 22 degrees Celsius is going to be comfortable.

So, statistical data bring objectivity to your writing and in certain disciplines like engineering, management, sciences, pharmacy, in biotechnology and in other departments of sciences and technology statistical data is this spine of the report without that that is the vertebral column of the report, without statistical data those reports mean nothing. But these data themselves may come in a variety of shapes. They may come as bar charts; they may come as histograms, they may come as graphs or pie charts or other kinds of statistical data, statistical table.

THE INDIAN AUTOMOTIVE INDUSTRY:
GROWTH AND OPPORTUNITIES

Light Vehicles have grown from 0.7m, in 2001, to 3.5m in 2011.
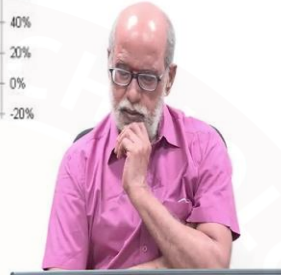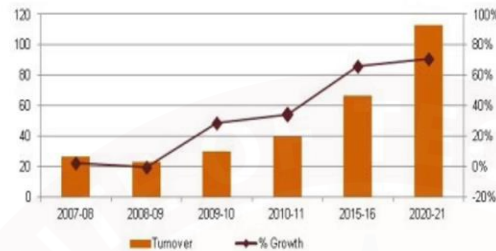
Here, for instance, are some statistical data on the growth of the automobile industry, or the automotive industry in India. It is not that we did not have the automobile industry in India before 2007. But you know, they were very limited not a huge percentage of the GNP the gross national product, they were very small, very minor portion.

But since 2007, since the time foreign companies also came into manufacturing India's automobile industry has grown, has proliferated and this the present draft or the slide shows you the growth, this is what statistical data do, they give you evidence for whatever claim you may be   making.
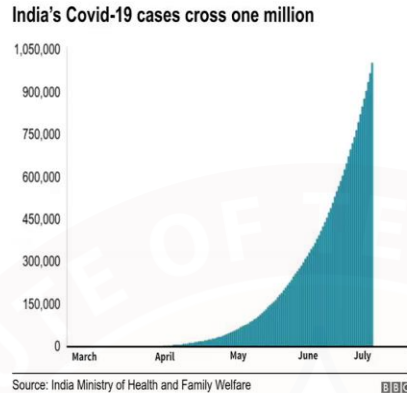
There are different ways of presenting statistical data; you present you can, they can be presented through a graph, through bar chart, through histogram, through a pie chart, there may be other ways. But reports that are written for them go beyond them. They are not just verbatim translations of what you see, these reports also take into account things that you do not generally see on the report, but they are there. We will look at them, go next.

(Refer Slide Time: 05:26)

Next, what do we write in our reports on these data? These are the things, ordinarily speaking you could do more but do not do less. These must be there on in any report using numerical data, using statistical data, we must have these things. Otherwise, your report will remain incomplete

in some manner. What are they? The following, number 1. What this data is about? Number 2, how it is presented statistically is it a bar chart, is it a graph chart, is it histogram, is it a pie chart? What is it? Then the main trends in the data.

What is obvious, what hits the viewer in one glance then significant details, some details that cannot be ignored, and we will soon look at examples. Some differences between different nodes, between two periods it grew slowly, but between two other periods it grew pretty rapidly maybe at the twice as fast or three times as fast, you can see and finally any concluding remarks. So, these four, five things are must are important parts of any report that is about these data, I am going to give you an example.

(Refer Slide Time: 07:24)

- See the following. Usually, these reports are written in about 150 words, especially at English proficiency tests. A report follows

FACEBOOK USERS IN JANUARY 2018

KIND OF USERS	NO. OF USERS
Monthly Active Users	2.13 B
Daily Active Users	1.40 B
DAU in Asia	499 M
Average Friends for Males	145 M
Average Friends for Females	166 M
Daily Video Views	100 M hrs
Time spent per user per day	20 Mins
Total World Population	7.6 B
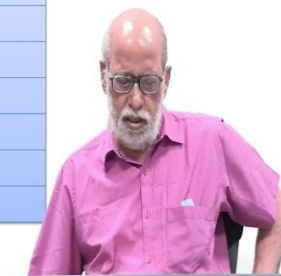
Look at the following table actually that is a table and usually, these reports are written at particularly at come back in at proficiency tests. You have a lot of proficiency tests in English these days, you have TOEFL, you have IELTS, you have GRE, you have access, and then there are other entrance tests.

Mostly in the proficiency test, you get this kind of data, and you are asked to write about them in about 150 words. So, the challenge becomes still greater. You have to write about all that you see, and beyond what you see within the limited number of words, if you write a few more than, a few words will be, I mean if you are asked to write 150 words you can write a 155 or you can write 145.

So, five words, more or less, will not be penalized; you will not be penalized for them. But if you are expected to write 150 words, and you write 170, or you write only 130, then 130 will be marked for under length. From your total, a certain percentage of marks will be deducted or if you write more than necessary then again a certain percentage of marks from your total would be deducted. So, ordinary try and write as I have been saying in academic writing is brief, precise, focused to the point, and then today I am saying once again write them in simple language.

Look at this example. Here are the statistical data. The number of Facebook users in January 2018, maybe three years ago. How many users were there worldwide such data are easily got through the net these days? So, for example, in the left-hand column, you have kind of users, and in the right, you have their numbers.

So, monthly active user's, daily active user's, daily active users in Asia, average friends for men, average number of friends for women and daily video views then time spent by these Facebook users on Facebook and then what percentage of the total world population they constitute, all of these form part of the data here. How do we write about them? Let us see.

(Refer Slide Time: 10:41)

FIRST DRAFT

The table presents statistical data about number of Facebook users and the frequency of their use. It is represented in the form of a table. There are two columns and 8 rows. The left hand column presents frequency of use, and the one on the right gives numbers. It shows that nearly half the Facebook users are in Asia and that a good number of people use Facebook daily.

Of the total number of global users of Facebook, as reported above, a little more than 50% are active daily users. Asia accounts for a little above 40% of the daily active users and nearly 25% of, over 2.25 billion global users.

This is the first draft. The table presents statistical data about the number of Facebook users and the frequency of their use. It is represented in the form of a table. There are two columns and eight rows, et cetera, et cetera. Look at the final draft. Next.

(Refer Slide Time: 11:06)

FINAL DRAFT

The table shows the number of Facebook users and the frequency of their use. The data are for January, 2018. The left hand column presents frequency of use, and the one on the right gives numbers. Of the 2.13 billion global users, nearly 50% are in Asia. A little over 50% of them are active daily users. Asia accounts for nearly 40% of the daily active users of Facebook.

All users have "friends" but, with about 166 million, women exceed men by over 10% in the number of friends.

FACEBOOK USERS IN JANUARY 2018

KIND OF USERS	NO. OF USERS
Monthly Active Users	2.13 B
Daily Active Users	1.40 B
DAU in Asia	499 M
Average Friends for Males	145 M
Average Friends for Females	166 M
Daily Video Views	100 M hrs
Time spent per user per day	20 Mins
Total World Population	7.6 B
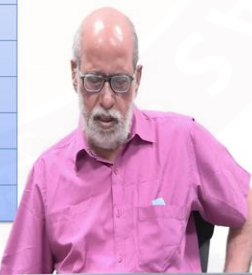
The final draft is a little more precise. If you compare, you will see. The table shows the number of Facebook users and the frequency of their use; the data are for January 2018. You have to indicate the period otherwise your report does not mean anything you can have all the data, but if you do not show which period it pertains to which period it is from or for then your report means nothing.

So, the left-hand column presents the frequency of use, and the one on the right gives numbers. Now, you can start looking at things of the 2.13 billion global daily active users; nearly 50 per cent are in Asia. So, you do not produce the numbers mechanically; you get the trends, you get significant details the half of them come from Asia. Actually, if they were further dissection of the data, it would be obvious that a good number of them come from India, Bangladesh, Thailand, Chinese data are not available for global purposes.

But if they were then China alone would account for overwhelming numbers because it is a large country both in the territory and in population. So, a little over 50 per cent of them are active daily users, Asia accounts for nearly 40 per cent of the daily active users of Facebook. So, what we are doing is rather than just reproduce mechanically the numbers that are already given in the table we are looking at trends.

We are saying Asia has about 40 per cent or 50 per cent. So, that we look at the packages these things may be used by advertisers, by business people, by engineers, imagine the kind of cable required, imagine the kind of data processing system is required where about 400 million people are uploading their videos at the same time, they all have to go, and they all have to reach the other end at the same time.

Otherwise, if it is, if it takes a few seconds longer, then users feel 'Oh God' this site is pretty slow. A few seconds delay can kill business, can delay, can cause frustration that is the nature of technology and human nature. Human nature is more demanding as the technology develops further. Earlier people covered the same distances in about 2 or 3 days that they do today over one night.

But or maybe they do in 2 hours, but even those 2 hours seem lots to them because we get used to them. So, what we have to try and show is not just the hard numbers, but overall trends that 40 per cent, 50 per cent of these. So, you can commute if you say 40 per cent of 1 billion then that means you are talking about 400 million people.

So, the number should not be difficult to get but presenting information this in this manner looking at globe behaviour, looking at chunks gives you a better grip on the data. You as managers can take better decisions, if I advertised in this medium, you know 400 million people are likely to see my ad, and if even 10 per cent of them see decide to buy my stuff, then I will be selling my product to at least 4 million people which is lots.

So, that is why business reports perform the function not just of translating data from visual to verbal mode. They also look inside the data, and they share those insights from within the data that is the important function. Otherwise, and once your report does that it will be considered a good report; otherwise, it is considered an inadequate, inappropriate report.

Look at another feature, the table also looks at you look at the earlier table. Please go back. Please go back. You see the table also look in one section the table has a gender-wise split it says Facebook allows people to create their own group of friends. So, lots of people can have lots of

friends. I have heard that people have friends in thousands, some I have heard her friends in millions very popular film stars, cricket players or soccer and golf players then maybe some politicians, some public figures have lots of followers.

But generally leaving big stars apart. Even other common users of Facebook have friends, both men and women. So, it also takes a gender-wise look, and it finds that on average women have more friends than men on Facebook. Now, what does it indicate? Number one, it indicates that they spend longer time though the difference is not of very many, the difference is about maybe 20, 21 million so in a huge number in thousand million what is 21 million.

But it indicates the trend. The trend is, and therefore it must be noted the trend is that more and more women are spending, becoming joining Facebook and such similar other social groups, social media, and they spend longer there. So, any business that has targets them can easily target them this way they can be reached much more easily this way than through conventional methods. So, a report must also highlight some of these things. Go back to the report. So, here it is says that all users have friends, but with about 166 million women exceed men by over 10 per cent in the number of friends, and it is quite likely that the numbers are growing.

(Refer Slide Time: 18:45)

For a global population of over seven billion, 100 million hours of daily use is under one percent of the total possible use of Facebook. But believing that fewer than a 1000 million use Facebook daily, it amounts to a staggering 10%. Many people, allegedly young, seem to be always there. World is fast turning into a global village. (149 Words)

Next page, overall. For a global population of 700 million-plus which is the population of the world today so many human beings about 100 million hours of daily on Facebook made by itself not be significant maybe under 1 per cent of the total population, under 1 per cent of the total possible use, but if you look at it the other way around the actual number of users who has to spend a lot of time say for example 1000 million that is 1 billion people.

Now, of these 1 billion people 100 million who then constitute 10 per cent and these 10 per cent or less to be those that are young that should be using their time learning skills, being more productive than simply engaging on chat sites or in social groups. So, but there are pluses and minuses the fact remains that the world is fast becoming, rapidly becoming one big community call it a global village, call it a global town or city but suddenly local boundaries seem pretty artificial the way news and views and videos and photographs and opinions and likes and dislikes, travel and are shared.

So, in that sense the statistical data we have there is a window on our changing world. We know how the world is changing and how communication can reach all corners of the globe different segments of the population. Now, all this is possible in reports on statistical data provided you keep those other things in mind can we go back to the four or five things we said we should keep in mind no go back here.

(Refer Slide Time: 21:03)

Number one, your report must say what it is all about. As we said, this report is about the number of Facebook users and the frequency of their use. How is it presented? It is presented as the table which has columns and rows. So, rows present categories of user's, sorry columns present categories of users, left column, right column, the right column gives you the number of users then main trends are presented.

Then significant details are given. You also highlight one or two differences that you feel are significant and finally concluding remark a good report from the business manager or a scientist or an engineer using a statistics must have these in the minimum. If you still have words, you can do more, but this is about all.

ACTIVITY

Write a report on the table of data given below.

Doctors in India

State	2000	2005
Bihar	32,226	35,477
U P	42,452	47,567
West Bengal	49,261	53,456
Maharashtra	77,278	96,062
Karnataka	57,464	69,492
Tamil Nadu	63,434	72,968
India	555,550	656,111

You can, as I have been telling in all sessions of all modules that we can become great speakers, great writers. We can become great users of the English language provided with practice, and we do so by ourselves making an effort, we may make mistakes, but we have not learned anything without making mistakes be it shaving, be doing our hair, be eating or washing or anything, cycling or swimming, we do make mistakes, but then that is how the highway to learning and how it to development highway to development lies.

So, for example, take tables like this look at them for a while spend maybe about 5 minutes looking at the columns, the rows and see if you find anything significant to say and then say that and then look at your draft once and again look at your drafts as many times as possible until you feel that you can bring no change anymore, that is the benchmark. You will suddenly find that you are not only become a good writer you also have, you are also seeing things within the same data that you had not seen better and no matter what you do, you might do that better if you learn how to write these things better.

So, we have given you lots of tables, graphs, charts here take any two or three of them write a similar report in about 150 words no more and not less. Maybe it could be one or two words, more or less. But that is about all, and then please do send your work back to us. We are also going to upload some more model answers. You can also compare your work with them. And if you feel like making any changes to make your work better, please do so. Good luck, and thank you.