INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NPTEL NPTEL ONLINE CERTIFICATION COURSE

Marketing Research

Lec -03
Developing Research Approach
&
Research Design: Non – Conclusion

Dr. Jogendra Kumar Nayak Department of Management Students Indian Institute of Technology Roorkee

Good morning friends welcome to class of marketing research and analysis as we remember we had started are discussion with what is marketing research what is a market and market researcher accordingly and how they are important why it is important for exclusives students PhD scholars everybody right so we are just we have just started a class and in which today what is we will go across the one other important things in it the research approach so what kind of research approach stood should a researcher have.

Should a researcher follow and what should a what shall kind of research design should it follow accordingly right so we will discussing on these things let us start with the research approach though what is the research approach basically and why should a researcher understand about developing a research approach a research approach you can understand from a simple term is a logical flow.

Is a logical flow or a logical path right that researcher should follow in order to conduct a study okay if you let us say for example sometimes a research could be theory based sometimes a research can come out of an observation it could be several ways so what is a best research approach what is the best path one should follow that is of concern okay.

Now let us look at it here and it says look the competition has a big stupid product we need a big stupid product of our own and we need it now so now when I am saying this so it suggest how people try to approach towards a particular problem in hand. So as I said it depends on the situation where the researcher is in is it practical empirical situation or it is a theoretically

observational or research oriented where it is being conducted that is to be seen so it is the way of dealing with a particular.

(Refer Slide Time: 02:34)



Research problem so our approach it is saying how do we go up the ladder go up the stair and reach to the goal.

(Refer Slide Time: 02:43)



Now let us look at this approach how effective is this approach now although this is a humorous it is very true right so now uncle Sam the big brother is hitting a terrarium in a way which is only you know increasing the hate rate in the society right so is it the right weight to be tackled with terrariums that is a question that we will think is the right approach could it be no other approach is either no approach other approach that can be delta with this problem.

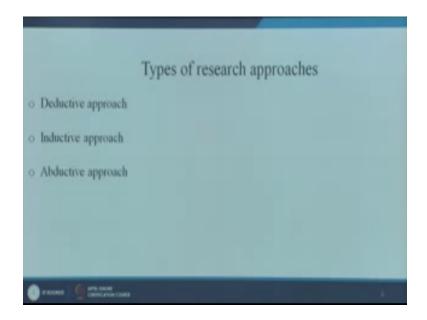
We will see that exactly we will discuss about these things so what are the types of research approaches as I said basically it is a logical flow right.

(Refer Slide Time: 03:35)



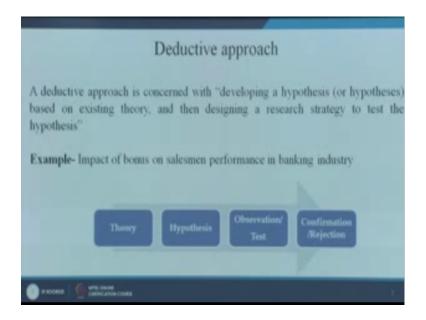
So on bases of that 3 types of approaches have been basically said to be you know any research starts with this and inductive deductive right the order does not matter and adductive okay so what is this let us start with a first one deduce.

(Refer Slide Time: 04:00)



The meaning if you understand the term deductive it comes from the word deduce you are deducing something right so when you are deducing something let us see what happens.

(Refer Slide Time: 04:14)



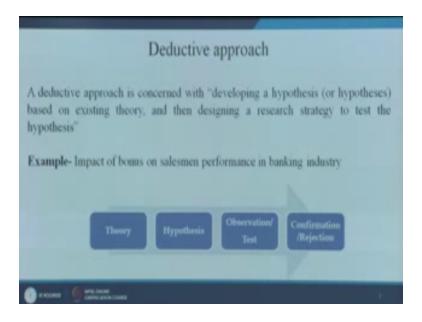
It says a deductive approach is concerned with developing a hypothesis based on a existing theory now that is very important the word theory is very important and needs to be underlined it is important.

(Refer Slide Time: 04:30)



So that means there exists a theory and on bases of this theory we are trying to develop an hypothesis and then design a research strategy to test the hypothesis so we say take the case example which I have given impact of bounces and says performance on sales performance in the banking industry for example now theory says that there is a you know carotids and strict approach for example you can provide carrots and you can motivate people or motivate the objects and they would be working better, so now on basis of this theory we will say that if bonus is given to people or the sales man their performance would increase now this if you look at it how does it move from the theory.

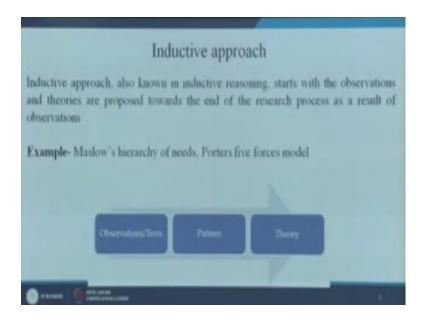
(Refer Slide Time: 05:23)



We develop then hypothesis on basis of the hypothesis we conduct some test we collect some data right from the field or maybe secondary primary that is the secondary this is a separate issue but we will conduct some test and collect some data and then we will analyze this data which is generally as pr my knowledge I have seen people are more interested to understand about the only the analysis, part right but no research can be complete without understanding the ground theory or the preparation of the whole you know.

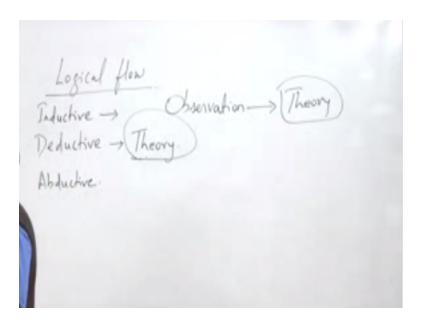
Research problem I even cannot think off there is lots of problems that can come up and the and the result might be completely allow sided a maybe a analysis and inference with lots of errors into it right, so it says a detective approach is concern with developing a hypothesis from a theory that means okay.

(Refer Slide Time: 06:27)



Now let us look at the inductive approach now this inductive approach is a different one.

(Refer Slide Time: 06:32)



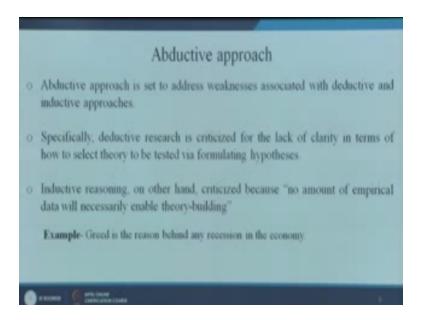
Newton saw that apple was falling on the ground maybe dozens of people 1000s of people must have seen it, but nobody question Newton question it right, and there from it is started the gravitational theory and things like it right, so when we says when you observe that means from an observation right you start ending up into a theory you end into a developing a theory from an observation so it says inductive approach also known as inductive raise means starts with the observations and theory.

Is that proposed toward the end of the research process so theory is an outcome right theory is an outcome of the approach of the observations so for example Maslow Abraham as said there re different kinds of needs in the society from basic needs right elementary in needs to last to the self actualization to reaching the self actualization where the reach a chance like you know for example there were many great people who were born in king family but at the end of the day they gave up everything.

Because that reach a stage of state of a self actualization self esteem so they had you know they had pass through the basic needs and you know social needs and all these things and finally that gotten up to state to understand can nothing is more important in life, so self actualization so similarly Maslow's theory of needs was based on certain observations in the society he observe certain people and their habits, similarly the protest five block model which is might very famous competitive strategy.

Model says what are the things affecting and industry the supplier the buyer the fight among the competition among the rival among the firms the government right, so different participants are affecting any kind of competition in the market right so there is an observation and finally theory, objective its approach is in between these two because the third approach is has been developed because there has been certain weakness in the inductive and the deductive okay.

(Refer Slide Time: 08:59)

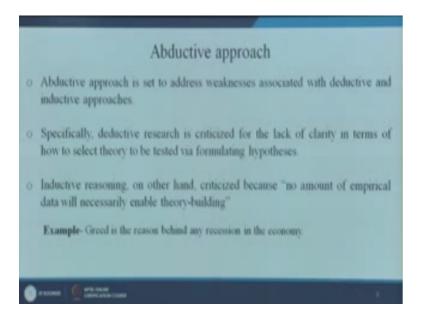


It as it says it sets to a address the weakness associated with the deductive approaches, now deductive approaches is criticized for the lack of clarity in terms of how to select the theory now as we said that it starts with the theory, now the question is which theory how do we know there are so many theories corrected with let say of managing people for example HR policies or improving the performance of a as a machine right, so because there is a lack of clarity to select theory.

It has there is a criticisms against it right similarly the criticism against the inductive reasoning is that no amount of empirical data will necessarily enable theory will be correct for example if you go on doing collecting data is and might they are connected might be they are not connected there might not be any correlation between them right, you are just collecting data these are understanding and at the end you might not be able to generate theory out of it, because the theory will be only established when there is a pattern, so the pattern if it is not established how we will generate the theory out of it.

So that is where comes the requirement of inductive region, the abductive reasoning okay, so what is the example I have given here if you can see.

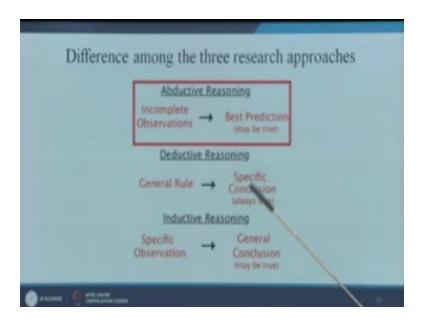
(Refer Slide Time: 10:27)



Greed is the reason behind any recession the economy right, so as I was saying to you let us take this example of an abductive approach where we are saying what is the reason behind the recession in the economy let us say some of the great recession that have happen in the world from the 1929 depression to any financial depression that happen even the recent you know supreme prices that happen.

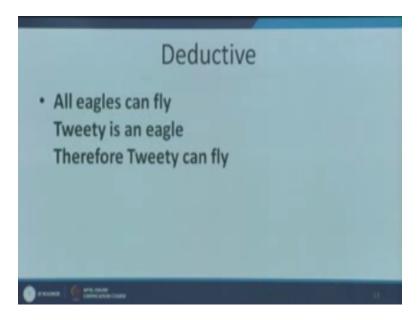
Greed is has been you know mentioned as one of the reason behind any recession in the economy, so now this was that I am saying this is in case of an abductive approach right, which is in between so it has taken care of neither there is you can establish your theory nor exactly you can deduce everything out, so that is why we say this is in between and this an abductive approach, okay. I give you some further examples, let us have a look at it, so it says.

(Refer Slide Time: 11:29)



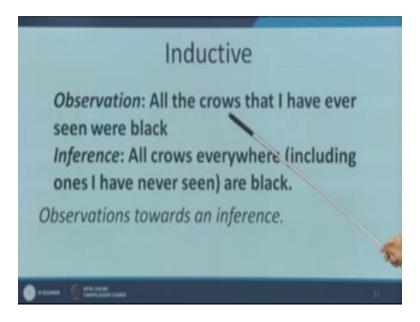
Inductive starts with specific observation, general conclusion deductive general rule goes to a specific conclusion which is always true, abductive reasoning comes with an incomplete observation this in incomplete observation and whatever we predict can be termed as the best possible prediction, okay.

(Refer Slide Time: 11:53)



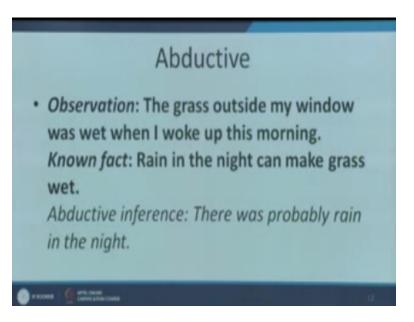
Now let us take an example one more, all eagles can fly, tweety is an eagle so therefore tweety can fly so we are deducting from the statement that all eagles can fly tweety is an eagle, so tweety can fly, right. So did we deducing it, right.

(Refer Slide Time: 12:15)



Similarly, let us take an inductive one all the crows that I have ever seen, all the crows that I have ever seen were black, so what is by inference turn, what is the theory I am building, all crows everywhere are black including once I have not seen so because from the observations I found out I have at a theory that all crows must be black, because all the ones which I have seen were black, okay. So observation towards an inference.

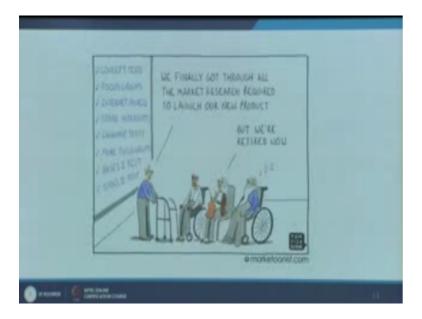
(Refer Slide Time: 12:47)



Now let us look at this third case, now that is very interesting the grass outside my window was wet when I woke up this morning okay, known fact. Rain in the night can make grass wet, so if there is a rain the grass can become wet. So there was probably at the as per abductive inference we will say there was probably rain in the night, why because it might be possible that who somebody had left a tap open or maybe somebody had sprinkled water.

All though the chances might be less of it, but still there is a chance so we will say there is probability here, but we are sure of it. So that is why this is the one approach, which is I will say an in between approach, okay.

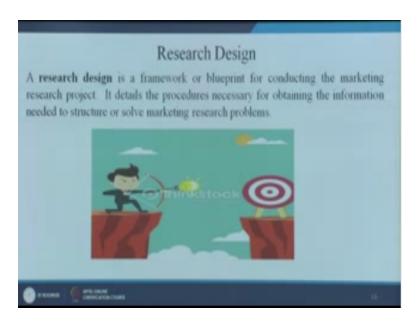
(Refer Slide Time: 13:35)



Now let us go move ahead, now what happens when you conduct a research study and you have gone through all such kind of test right, you have done but what he is saying in the humor we say, we finally got through all the market research required to launch our new product, but we are retired now so that means research dose not even allow you to take too much of time at least in the applied research, in marketing research.

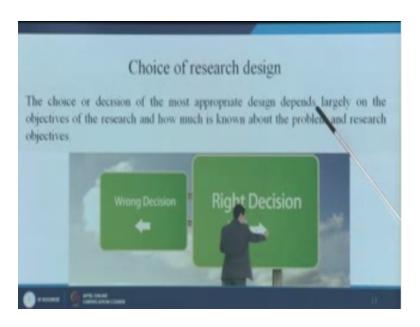
We cannot take as much as of time we want it is not possible right, because things change cultural changes are happening for example if you look at in India certain time back sometime back, the fashion, the culture or what was there had there has been interesting change in today right, people are more westernized, people are trying to follow the recent life styles which they see elsewhere on TV, or internet or anything right. So what is the research design now?

(Refer Slide Time: 14:37)



So we said with research approach now what is the design, so design is more you can say planned network, a planned approach it is a framework or blue print for conducting the marketing research project. It details the procedures necessary for obtaining the information needed to solve the marketing research problems, that means in one way if I say I will tell that the research design is nothing but it is a road map which tells you what to do when to do how to do and how would you proceed basically so that you can completely have a proper you know study right okay choice of research design.

(Refer Slide Time: 15:26)

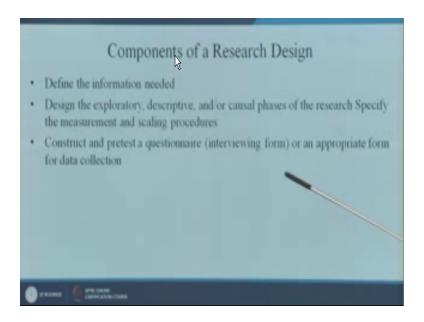


Suppose it depended on largely on the objective of the research now what is the objective for example we have say if you are doing an explore it you are trying to find out something like a you have a deductive approach you have something for example you are trying to deduce something from the market or you want to know about something or suppose we do not know what is there is a market in the even the Africa or Andaman and Nicobar Islands there could be a pupil who would try to buy.

So we do not know their condition their tradition their economical status and all, so when we do not know what kind of research we will design we will follow we do not know that also, similarly sometimes you must have a if you are seen in the last class I also said one of the classes where I say about paper boat paper boat is a company which is trying to touch upon your childhood feelings how do you when people buy how do they associate themselves with the childhood memories and all these.

So when this companies must have you know started these products they must have researched what do you people exactly look in when they buy how they stagy through the gate to buy a product. So a wrong decision or a right decision right if you take a wrong route then you will land up somewhere else which is not desirable right. Let us see the components.

(Refer Slide Time: 16:44)



So the components are first defining we are started in the class if you cannot define your research will never be complete right design the exploratory descriptive or coastal phases now when I talk about research design basically can be divided I to three parts let us say right. So what are the three parts?

Now first is we start with an exploratory research right as you can understand from the name exploratory it raise to explore something okay then we say there is there are this is a basically comes under the non conclusive research because there is not conclusion here right then we have another which comes under the conclusive research. Now what is comes under the conclusive research?

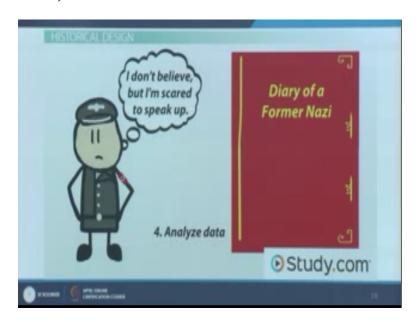
Now one is the descriptive research and the causal research okay causal research so as I started with exploratory says something to explore now you need to explore it right so in this case let us finish this first this one design the exploratory descript your causal phases of the research specifying the measurement scaling procedures. Now for example how do you want to measure? How would you measure satisfaction for example, we know how to measure wait we know how to measure capacity we know how to measure distance but how would you measure a social science constrict or let us say social factor for example let us satisfaction honesty loyalty and all these things so how would you measure?

So you need have a proper scale for it in fact I will spend time on developing a scale validating a scale and all these things later on but for the moment let us understand there we need a scale if

we were to compare for example let us say two great personalities from two different fields although it is not possible but still we have to do it because let us say there is only one price to be given. So in such a condition we need to have a scale to you know standardize their achievements okay, then constructing the questionnaire or a form interviewing form or an appropriate form for data collection right then specifying the sampling process so who is the sample.

Sometimes we conduct mistake by understanding not understanding the right sample okay and finally what is the sample size what is the sample size that we need so when we do this we have to be very clear suppose I m conducting a research on let say on men and men does not include suppose what is the let say the economic status I cannot include boy after 12 year old team or 14 year old team in that side although is a man right is a genetically or biologically is a man.

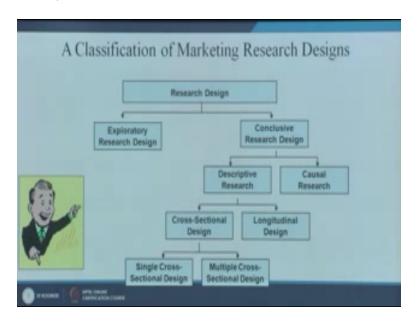
(Refer Slide Time: 20:04)



But we cannot say we cannot included in the research so sample size accordingly right then finally we plan a data analysis now let us move to something called although it is not discussed much but still historical design now this guy we can see the example this is the diary of a former Nazi right very right is you know autobiography we must seen people doing at the end of the carrier trying to all those at they never speak up right.

Very famous politicians very famous sports people and finally they try to speak up in the you know in the book autobiography so this is something were we try to go into historical part of the story and try to find out what is happen how it happen and what were the implications and all this right.

(Refer Slide Time: 20:52)



When I am classifying research marker research design basically I had explained before in the board exploratory and conclusive descriptive and casual right so descriptive basically as exploratory was to explore similarly descriptive is to describe now just tell mw let understand if we not have an idea of anything how would be described it so the minimum starting point the

initiating point of any descriptive research is with the hypothesis that a person has got certain

researcher got certain knowledge about the subject right.

Now that may be for example we know that because of the particular kind of promotion the sales

in one market in a particular market increased so we have the knowledge so we can assume that

even if we use the same promotional measure in this another market he might also increased so

this is the hypothesis we have design or generated okay.

Similarly casual the name suggest is cause and effect every action you know for every action

there is an opposite reaction equal and opposite reaction right now when you say this casual

similarly says there is cause and effect for every cause there is an effect or you know there is an

that means beyond every effect there is an cause right.

So again how this divided will see cross sectional design longitudinal design so depends on the

type of the design of the descriptive researchers right so will locate it slowly were cross sectional

generally means that one point of time you take across A horizontally long chain of respondents

at one point of time similar so this would not be much expected to be much ever difference

making the respondents we use.

Because of the same time frame okay on the other hand longitudinal design takes up few

respondents across the different time periods so that to see whether there has been any change in

the behavior patterns a cross the different times so when we say do this, is basically if you can

understand for example if you see that capital, net capital you know the satisfaction on inflation

in our country of anything so all these things how it is changed across certain years. So only if

few people are forced one has to be taken there will be a chained across suddenly number of

years right, so as I started with.

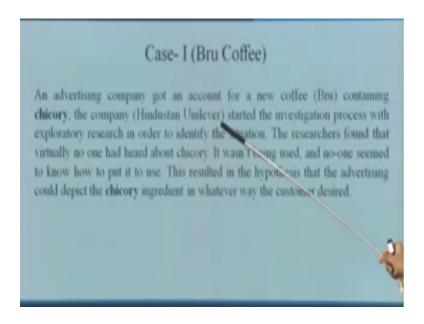
(Refer Slide Time: 23:36)

Exploratory research A research design characterized by a flexible and evolving approach to understand marketing phenomena that are inherently difficult to measure. The primary objective of exploratory research is to provide insights into and an understanding of marketing phenomena. Example- Discovery of America by Christopher Columbus, Inventor of photocopying machine by Chester Carlson.

Exploratory study, the primary objective is very flexible obviously right you do not know nay thing here, there is the flexible and evolving approach for marketing phenomenon. For example generally we have seen that I do not understand how many people react for example if you see this discovery of America by Christopher Columbus, so he was just going to navigating the world. And he suddenly discovered the America.

Similarly photocopy machine when Carlson developed he had no clue that what is he exactly doing but he thought of very possibly, he would be able to find something like this. so expletory research helps to explain and understand the integrities of a particular work of research or problem okay. Let us take this case.

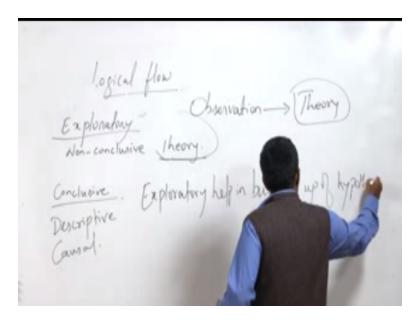
(Refer Slide Time: 24:39)



An advertising company bought an account, for a new coffee Bru which from Hindustan Unlever considering chicory. Now chicory is the ingredient right, when this company wanted to make an add, that people had no idea what is chicory right, researchers found that virtually no one had heard about chicory. It was not be used and no one is seem to know how to use it. This resulted in the hypothesis that the advertisement could depict.

The chicory ingredient in whatever the way the customer wanted it okay. So what is happening here, now if you see that means we understand, if I can write it like this chicory or whatever the research basically, what is happening?

(Refer Slide Time: 25:40)



The exploratory research helps in building up of hypothesis right, so it helps to you to come to certain kind of hypothesis right that is the biggest advantages of the exploratory research.

(Refer Slide Time: 26:09)

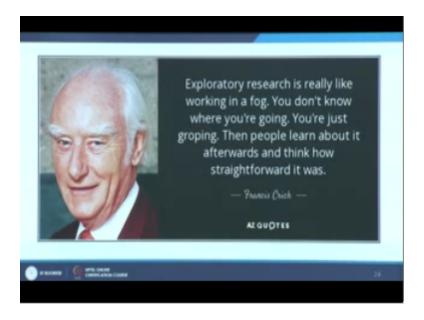
Case- II (Crime Investigation Program)

The favorite crime investigation TV programs (e.g., Sherlock Holmes, True, Detective etc.) give a pretty good example of the research design. These shows typically start with a crime that needs to be investigated. The initial step is to look for hints which can help establish what has happened (exploratory). The clues found in the exploratory phase of the research usually point in the direction of a specific hypothesis or explanation of the events which happened, and investigators start focusing their efforts in this direction, performing interviews with witnesses and suspects (descriptive)

This is one more the interesting one the Sherlock Holmes if you have read the book, it gives us the pretty good example of the research shows that typically it starts from the crime that needs to be investigated. The initial step is to look for hints which can help establish what has happened, so looking for hints, looking observing it is kind of way in which you try to explore actually the reason or something and then from where you move towards building up of hypothesis and then reaching to a certain conclusion.

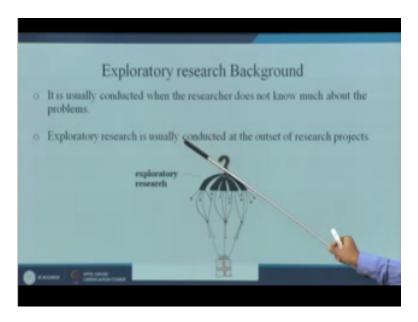
So the investigators starts focusing efforts in their direction performing interviews with witnesses and suspects right, so this at the later end exploratory generally people have a confusion that when we conduct a research it should be only exploratory or it should be only descriptive no it is not like that every research in fact you start it starts with basically a kind like an exploratory research if you do not have an idea about it but later on we may be we move on to towards the descriptive kind of a design and slowly this could be a combination it is not necessary at all to have only one kind of research is an and one has to be very clear on that okay.

(Refer Slide Time: 27:36)



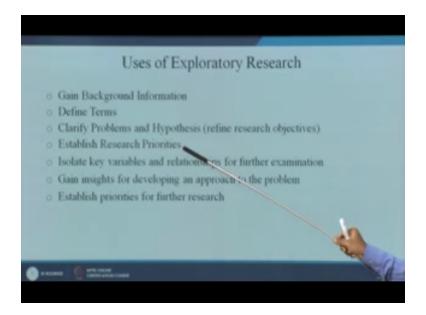
Now what is this saying Francis crick says exploratory research is like working in a fog it means when that is in the fog mist so it is not the road is not clear you do not know where you are going you are just groping you are just trying to grope in the fog then people learn about it afterwards and think how straight forward it was initially when you do not know something it looks like task it looks like a mountain to be moved but actually it might be very easy but still the research was done it was exploded it for him it has to be given on the credit because nobody knew about it he started it he found he gave an idea he developed it is usually conducted when the researcher exploded background is it is usually conducted when the researcher does not know more much about the problems right.

(Refer Slide Time: 28:27)



Exploratory research is usually conducted at the outset of research projects as a finally we come to the end.

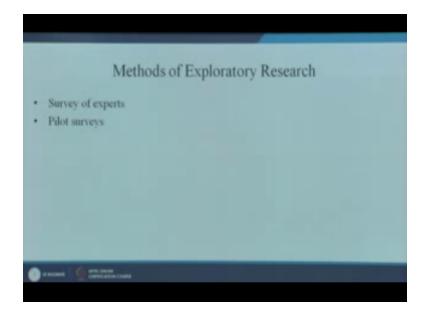
(Refer Slide Time: 28:34)



So let's see some of the uses right first you have to gain a background information define the terms clarify the problems and develop hypothesis help in developing hypothesis establish the research priorities what is the research all about isolate that the key variables and relationships so this is how you move in then exploratory design right gain the insides for developing an approach establish the priorities for further research okay.

Now if you go back and see when you have come to this stage of establishing the priorities by that time the explorer or the researcher they are doing the conducting the exploratory research has developed certain key inside of the study okay.

(Refer Slide Time: 29:24)



Now some of the methods what we will be conducting while which I will be you know telling you in the may be next section is like survey of experts must also have heard about the pilot surveys think under right then using secondary data understanding qualitative manner right then qualitative research we have some techniques focus group which is very important how focus groups are used why they are used and how it can be so helpful in the marketing pair lines at least we can see that I will give an example how companies have used focused group for a as a technique to get ideas about certain things which they had to know clue at all for example right.

So there are certain examples we will see how focus group is very helpful in there projective techniques is another wonderful way of understanding into the human consumers mindset they are ethnographic studies as well which I have not mentioned but ethnographic studies where you try to understand the cultural the behavior of people right so there some of the exploratory techniques which are which will be carried out next section which I will be telling you well that's all discussing about the next exporting descriptive and cellos in more detail okay I hope I understood this part what is in the research approach and what is the research design and how they are different and what are the different research designs and similarly what are recent different research approaches in a study in marketer study for that okay thank you thank you so much.

For Further Details Contact

Coordinator.Educational Technology Cell Indian Institute of Technology Roorkee Roorkee 247 667

E-Mail <u>Etcellitrke@gmail.com</u> <u>etcell@itr.ernet.in</u> Website: <u>www.itr.ac.in/centers/ETC</u>. <u>www.nptel.ac.in</u>

Production Team
Sarath Koovery
Mohan Raj. S
Jithin. K
Pankaj saini
Graphics
Binoy. V.P
Camera
Arun. S

Online Editing Arun.S Video Editing Arun.S

NPTEL Cooridinator Prof B.K Gandhi

An Educational Technology Cell IIT Roorkee Production