

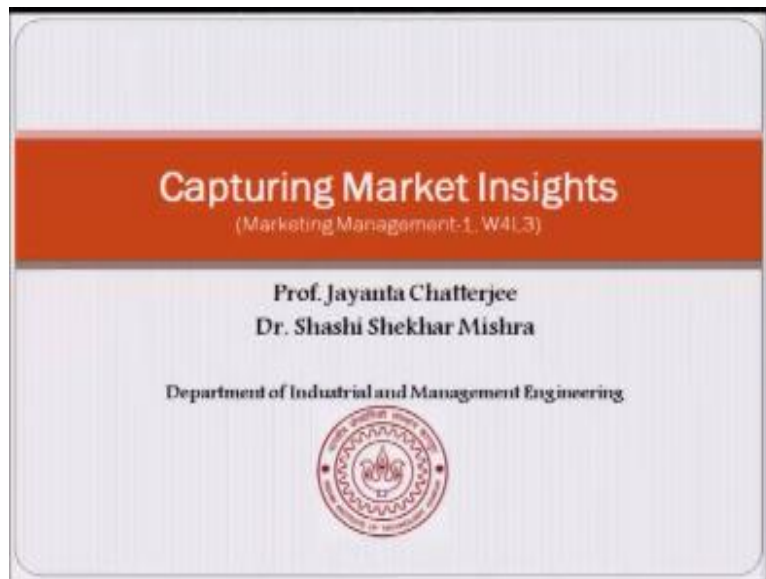
Indian Institute of Technology Kanpur
National Programme on Technology Enhanced Learning (NPTEL)
Course Title
Marketing Management – 1

Lecture: W4-L3
Capturing Marketing Insights

by
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Dr. Shashi Shekhar Mishra: Hello and welcome to our course, marketing management part 1.

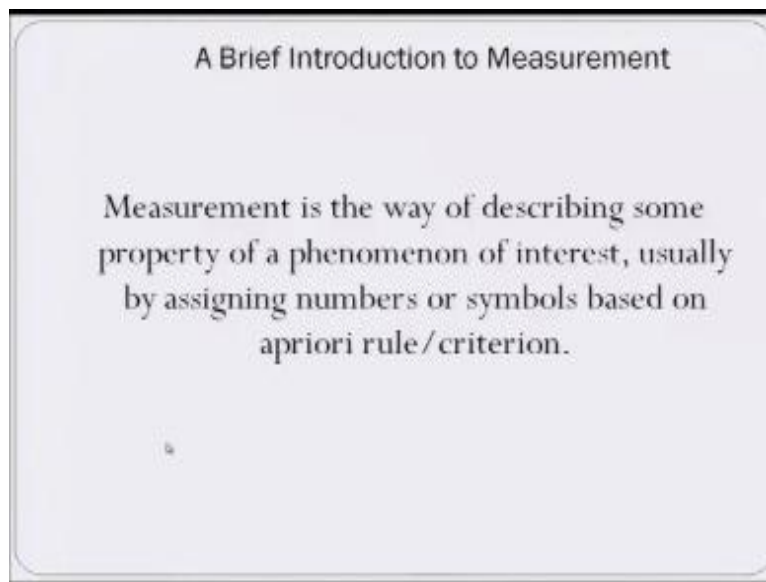
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Dr. Shashi Shekhar Mishra: We are in week 4, discussing about the third module of this course that is capturing market insights. And this is lecture three of this week four. So I am going to give you a quick recap of what we have done in the previous two session of this week, and from there onwards I will continue. So what we have started discussing in the last session was about measurement and scaling, because what we have discussed was about the concept and the information which was needed, but it needs to be measured also.

So that you can conclusively take some kind of decision, the information based on which you can make the information. So this measurement and scaling part is basically the link between the theoretical plane and the empirical plane, that is the concept or the decision that you are going to take and based on which evidences you are going to take, this is that link between these two parts.

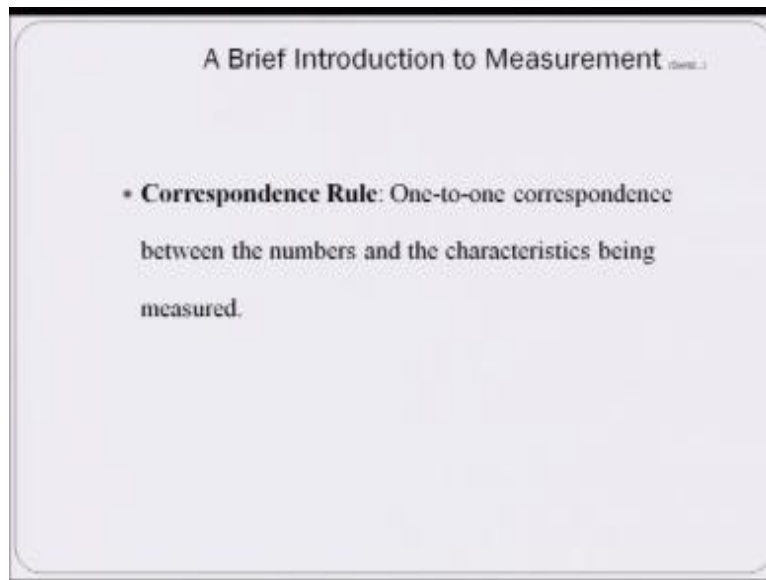
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Dr. Shashi Shekhar Mishra: As you can see what we have discussed in the previous class was what is measurement? Measurement is the way of describing some property of a phenomena where we are trying to describe some property of a phenomena of interest usually by assigning some symbols or the numbers based on apriori rule or some criteria's. So measurement involves assigning some symbols or numbers to some property, depending on its degree or level to which that property exist in an object, and that is based on some ascertained or apriori set criteria's or the rules.

Now I talked about three important things in the case of measurement is, the correspondence rule that one object, one cannot have more than one number being assigned or more than one symbol can be assigned to one object corresponding to its particular property.

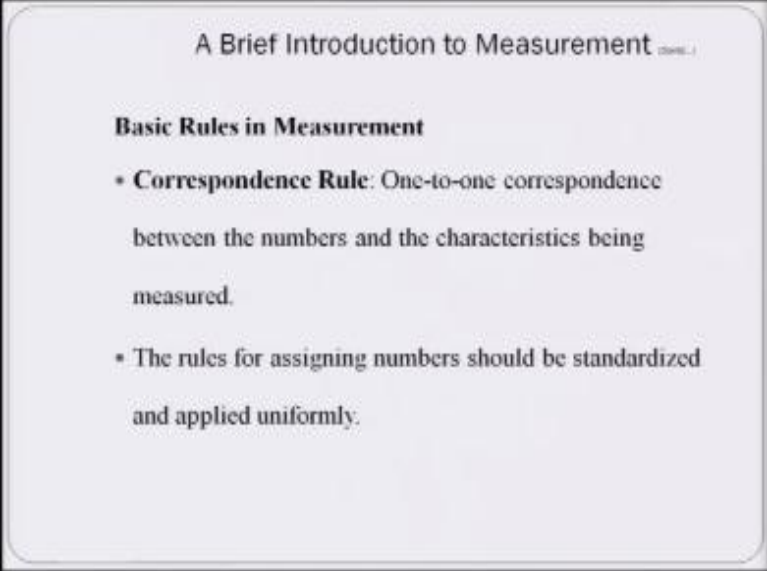
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Dr. Shashi Shekhar Mishra: So I have shown to you that through an example, that when we are talking about nominal scale and we are talking about the registration number being assigned to the students or the participant in this course, you will not find a candidate being assigned more than one registration number. So that is one-to-one correspondence between the numbers assigned, and the characteristics being measured.

So one student will be assigned only one registration number, one student will be assigned only one grade, one student will be assigned only one particular, he will have a certain marks obtained in his final exams okay. So you will see that there is a one-to-one relationship here.

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A Brief Introduction to Measurement close

Basic Rules in Measurement

- **Correspondence Rule:** One-to-one correspondence between the numbers and the characteristics being measured.
- The rules for assigning numbers should be standardized and applied uniformly.

Dr. Shashi Shekhar Mishra: Then you will also see that these rules are standardized and applied uniformly, you cannot change the rules of assignment over the course of the time or from one object to the other object. So there is a -- there has to be consistency in terms of the assignment of the symbols or the numbers in terms of across the objects that you are measuring and over the period of time.

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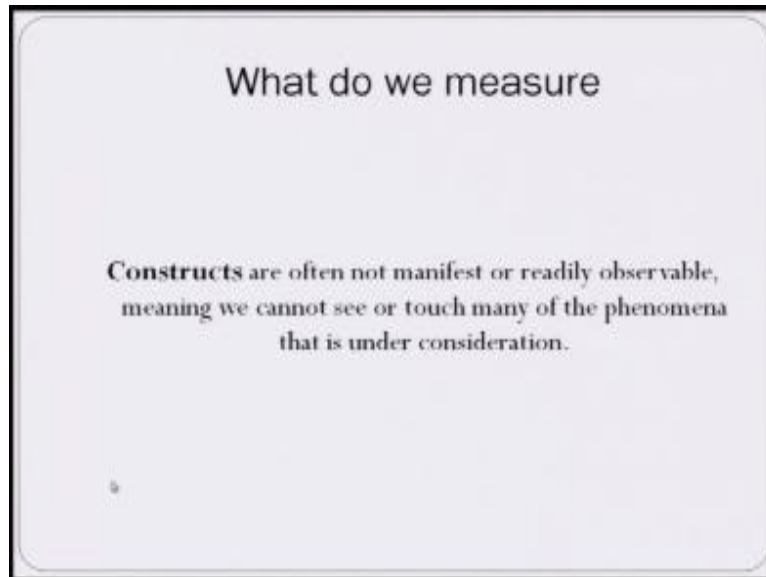
A Brief Introduction to Measurement (Contd.)

Basic Rules in Measurement

- **Correspondence Rule:** One-to-one correspondence between the numbers and the characteristics being measured.
- The rules for assigning numbers should be standardized and applied uniformly.
- Rules must not change over objects or time.

Dr. Shashi Shekhar Mishra: So that these are three important things that you need to remember about the measurement that we have already discussed.

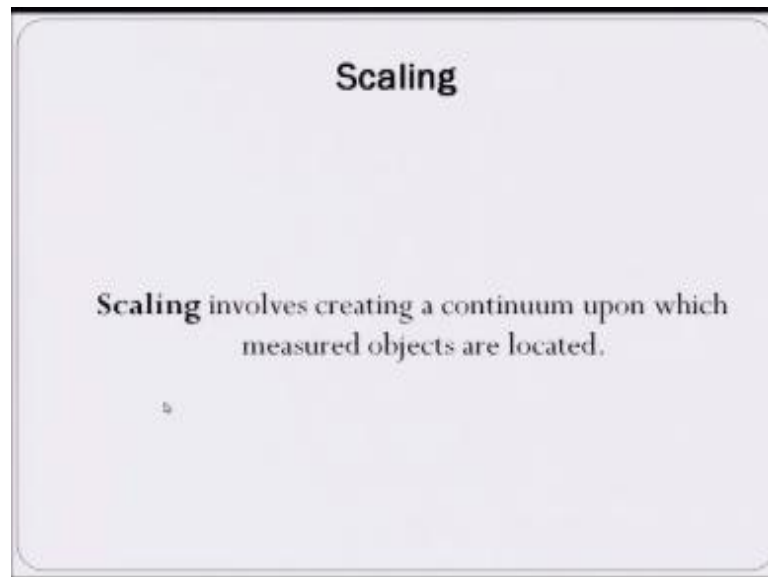
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Dr. Shashi Shekhar Mishra: Then I started talking about what do we measure, so what we measure is basically constructs which are not so easily observable like what we study in some of the other areas like science or applied sciences where the variable under consideration can be directly be observable. So I gave you certain examples like when we talk about the velocity, when we talk about the distance covered, these can be directly observed and measured.

However the kind of concept that we study in marketing they are latent in the nature and for them to be understood or for them to be measured basically, you have to measure them by their manifest or indicators.

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Dr. Shashi Shekhar Mishra: The next thing after measurement was what is scaling? So to measure you have to create a scale, a scale is basically a continuum upon which a measured object is located. So you first create the extremes or the range on which the property has to be measured whether it is a scale of 1 to 5, or 1 to 7, or 1 to 100, whether it is a continuous scale or so basically a interval scale, depending on whatever it is but you have to create a continuum, you have to basically decide what are the basically the ends of this continuum, and then once you have created the skills you can assign an object depending on its the property the degree or level of the property you can assign a particular number or symbol to that particular property.

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Scales of Measurement			
Reg. No (Nominal)	Class Rank (Ordinal)	Level of Class Participation (Very Low-Very High)	Marks in the final written course (Ratio Scale)
1	3	4	60
2	1	3	95
3	5	1	40
4	4	2	50
5	2	5	75

Dr. Shashi Shekhar Mishra: So based on these, this discussion we talked about the four different types of scales that exist and that are commonly used the marketing research are, the first one was nominal scale as you can recall. I gave you the example of the registration numbers being assigned, this class has a 5,6,2,5 participant enrolled in this course so those are basically the numbers, the registration number that is basically a nominal scale where participant one has been assigned a registration number, the first participant was assigned registration number one.

The rest of the participants were sequentially or orderly assigned the number on first come first serve basis.

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Scales of Measurement			
Reg. No (Nominal)	Class Rank (Ordinal)	Level of Class Participation (Very Low-Very High)	Marks in the final written course (Ratio Scale)
1	3	4	60
2	1	3	95
3	5	1	40
4	4	2	50
5	2	5	75

Dr. Shashi Shekhar Mishra: So you will see that these are the registration number which is sort of nominal scale, then we talked about the class rank. So based on the overall scheme in the class you will get the final grades or final marks and based on that your class ranking will be, can be created so this is basically the ordinal scale. Then the third one was the interval scale, like what is your level of participation in the course? I talked about the classroom settings where this, this is something which is very important in face-to-face interaction where you want to judge the participants based on their class participation in the discussions.

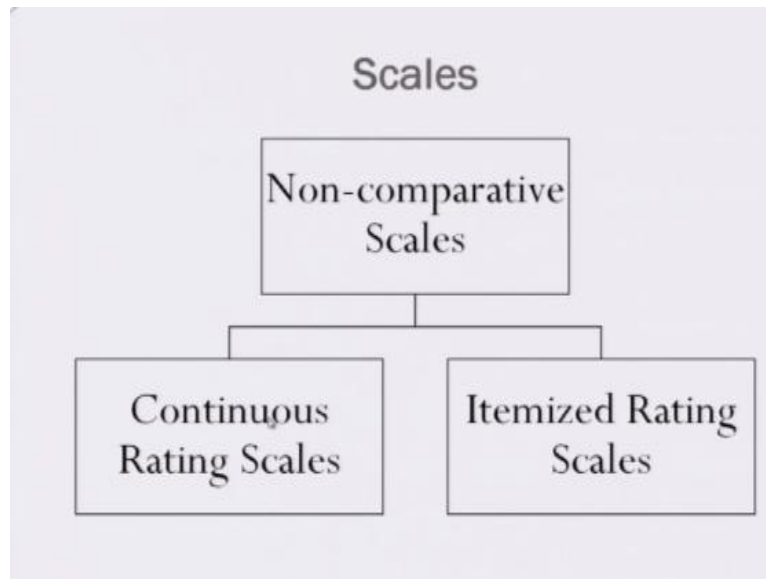
So you can say like whether this participation was very low to low, or average high to very high, so that was a basically.

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Scales of Measurement			
Reg. No (Nominal)	Class Rank (Ordinal)	Level of Class Participation (Very Low-Very High)	Marks in the final written course (Ratio Scale)
1	3	4	60
2	1	3	95
3	5	1	40
4	4	2	50
5	2	5	75

Dr. Shashi Shekhar Mishra: Interval scale and the marks obtained in the final exam which is basically sort of a MCQ exam plus some subjective position attached with that, so what is your total marks out of hundred, the top person got 95 marks so that is basically a ratio scale, so till now have discussed this much.

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Dr. Shashi Shekhar Mishra: And we talked about the types of scales basically that exists in the marketing research is as comparative, non-comparative. Mostly we talk about non-comparative scale, in the comparative scale you measure one object with respect to other and in the non-comparative scale you are measured the objects individually, there basically you have continuous rating scale, itemized rating scale.

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Itemized Rating Scale

- Different category, a number/brief description associated with each category.
- Ordered categories in terms of scale position, to select the specified category that best describes the object being rated.
- The commonly used itemized rating scales are the Likert, semantic differential etc.

Dr. Shashi Shekhar Mishra: So we discussed about, in the itemizing rating scale I have told you that you have basically, since this is the interval type of a scale you have the categories that with certain number, brief description associated with each category, ordered categories in terms of a scale position to select the specified category that best describes object being rated.

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Likert Scale

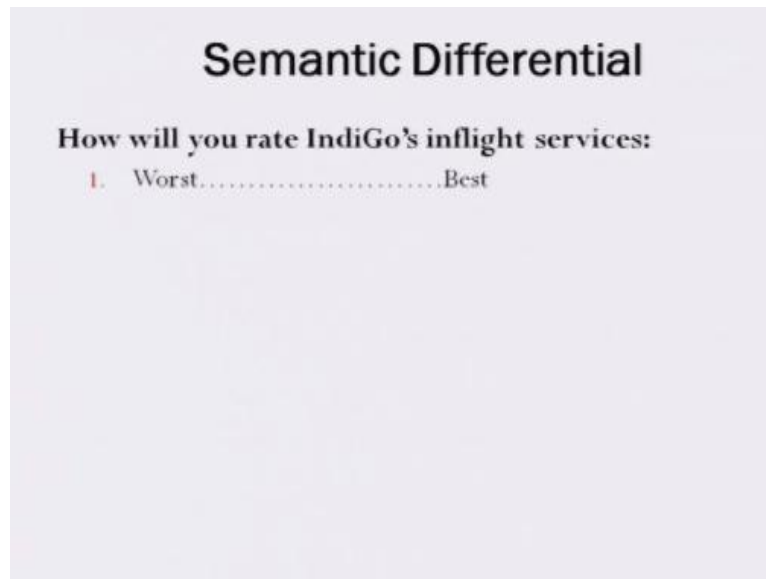
I think Marketing Management-I is must course for managers:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

Dr. Shashi Shekhar Mishra: So I gave you the example of this itemized scale also, like one thing was like I think marketing management is a must course for managers based on your learning's, based on your experience with this course what do you think that how basically good this course is for the managers so your recommendation, so whether your recommendation is on a higher side or on a favorable or unfavorable side depending on these five categories are there, you will find out all the people who are saying that they strongly disagree. They strongly disagree is one category actually all the people who are saying you strongly disagree may not be saying the exactly the same thing.

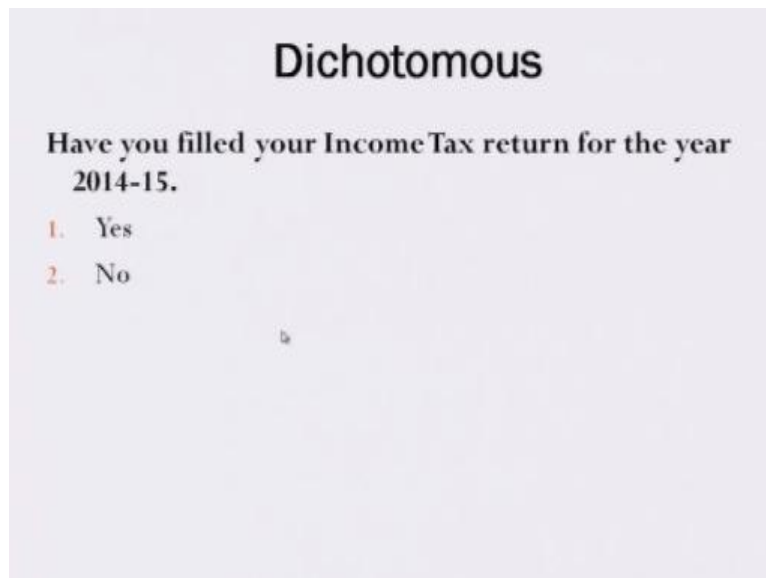
Or their level of disagreement might not be the same, so you understand this is not a basically a point, again this is a category or it within this it has a variation inside it, it represent a sort of a range of responses but all of them will be treated as one type of category.

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Dr. Shashi Shekhar Mishra: Then I talked about the semantic differential scale where you have a property being measured on the opposite ends of the wordings.

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Dr. Shashi Shekhar Mishra: Then I also talked about the dichotomous type of a scale like a where you have only two responses like this, have you filled your ITR for the year 2014- 15, your answer can be either yes or it could be no.

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Multiple Choice

- You've gone out for dinners with:
 - ☐ No one
 - ☐ Spouse
 - ☐ Spouse and childrens
 - ☐ Children only
 - ☐ Business associates/friends/relatives
 - ☐ An organized tour group

Dr. Shashi Shekhar Mishra: Multiple choice where you have more than one options to probably select.

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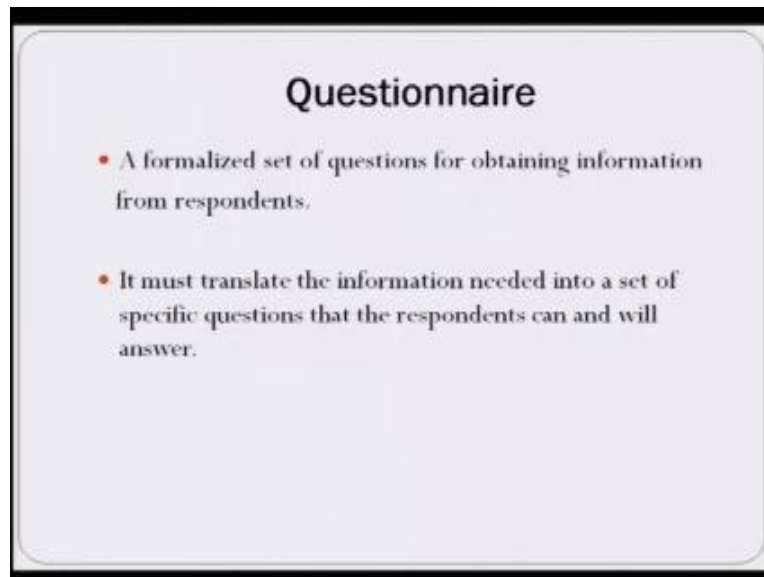
Questionnaire

- A formalized set of questions for obtaining information from respondents.
- It must translate the information needed into a set of specific questions that the respondents can and will answer.

Dr. Shashi Shekhar Mishra: Now you see once you have learned this measurement and scaling the thing is that once you have learned to frame the questions you have understood what kind of scales you required and how to frame, which is the best type of scales to be employed whether it should be Likert scale or whether it should be a semantic differential scale.

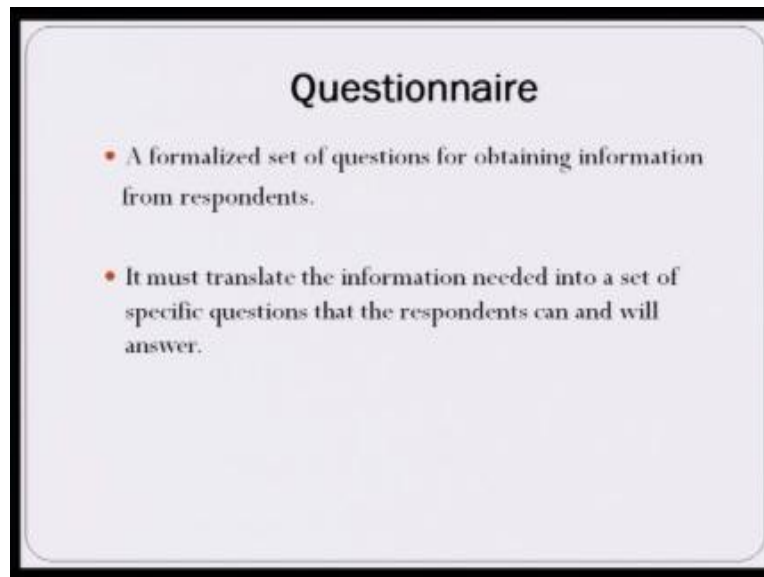
And the next thing will be the design of the questionnaire that you need to administer among the basically the sample or among the basically your target respondent. So what is questionnaire? A formula is set of questions for obtaining information from the respondent.

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Dr. Shashi Shekhar Mishra: So whatever the information that is required for answering your research questions, that question is being called out or is being demanded from there probably is expected or what you say, is taken from the respondent through this questionnaire method and through the different questions you asked, what happens here is.

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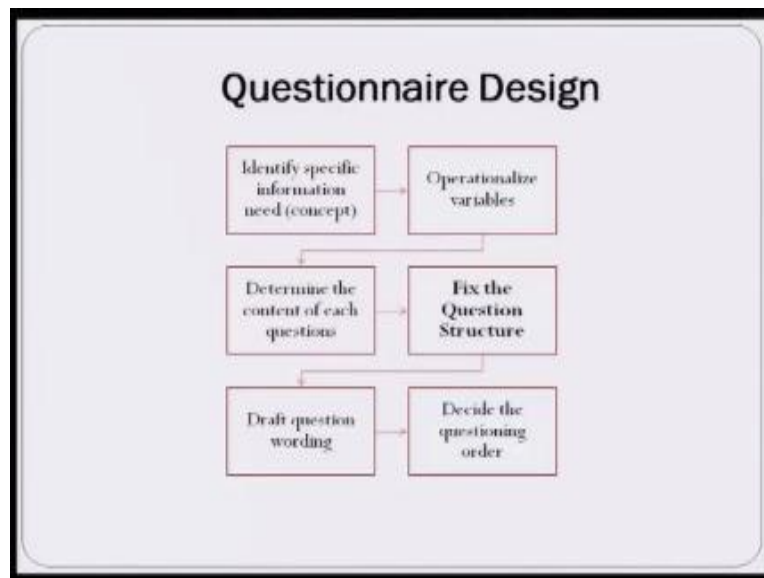
Dr. Shashi Shekhar Mishra: That it must translate the information needed into a set of specific questions. Whatever information that you require for your marketing questions, marketing, corresponding to your marketing decision problem you need to basically translate that those questions or that information required into the specific question. Now this is a very important point that they in this module.

Because a one mistake that we often see is that without basically understanding the objectives or without understanding the need of the information, we see lot of times people designing the questionnaire where there is a there is a very less of the overlap between what the information is required and what you are asking in your questions. So that is a basically a very common occurring problem.

You should try to avoid that because if you are not asking the right questions, then probably the information that you retrieve from or you get or you obtain from the respondent will not be suitable to answer the question and it will also hamper your data collection process because if you ask too many questions or if your questions are not properly framed then probably also the responses get affected by that, the response rate get affected by the way you conduct or you

design the questionnaire and you execute this data collection process. So this is something which is very important to keep in mind.

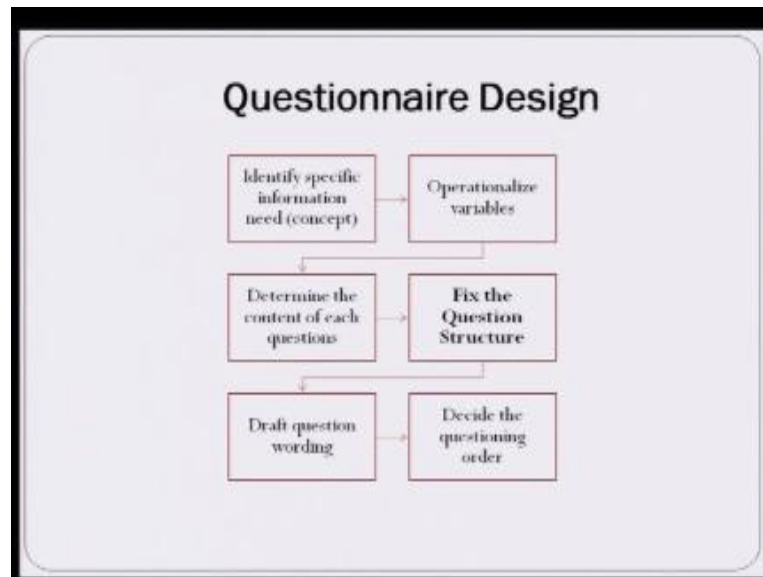
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Dr. Shashi Shekhar Mishra: And you will see that the thing which, which, which goes inside this questionnaire design is, it start from what basically the information is required or what is the information that you are looking for, based on that you basically find out what are the variables under study; what are the concept that you are going to study and then you operationalize those concept in the term.

Whatever basically the concept or whatever the information that you are looking for you need to operationalize, you need to convert that concept into the questions that you, you should ask to the respondents.

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Dr. Shashi Shekhar Mishra: So operationalization of that variable and then determine the content of each questions. So you know basically you wanted to study the, in a study you wanted to study the service quality and the different aspect of that and what is the impact of the service quality on the customer satisfaction and then what is the impact of the customer satisfaction on the customer loyalty.

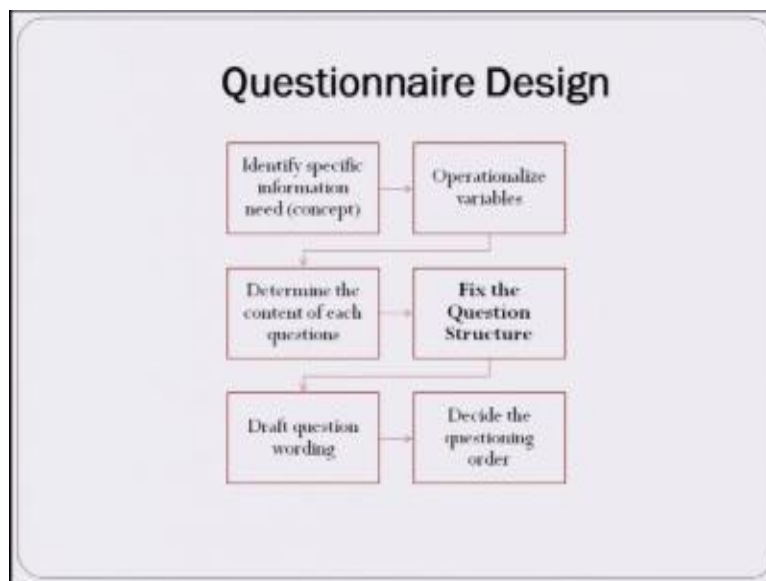
So if that is basically your, the information required in your study. So you need to understand that you are studying the service quality, customer satisfaction and the customer loyalty. So these are the three concepts you have to come out with a operational definition or the, the basically the definition that helps you in understanding what, what constitute these concept. So you make your question based on those operational definition for service quality.

Customer satisfaction and the customer loyalty and you have to basically decide within that each of these dimensions or the within for their particular concept, what questions to be asked? So that you get to know what is the level of the service quality being provided by the service provider, what is the level of the customer satisfaction or what is the customer loyalty like a, take the example of the customer loyalty.

If a customer is loyal, then you will see that certain kind of a manifest or the certain kind of behavior from their side is that customer will be purchasing from you only. So you will find out that of the total spending on the product category you will be getting the major part or all the part of his spending on your product or the brand or the service, then you will also see that they are purchasing more regularly from you or if is a basically a service as in the case of this example, service quality related then you will find out that their visits are more or they purchase more, their purchase frequency is higher.

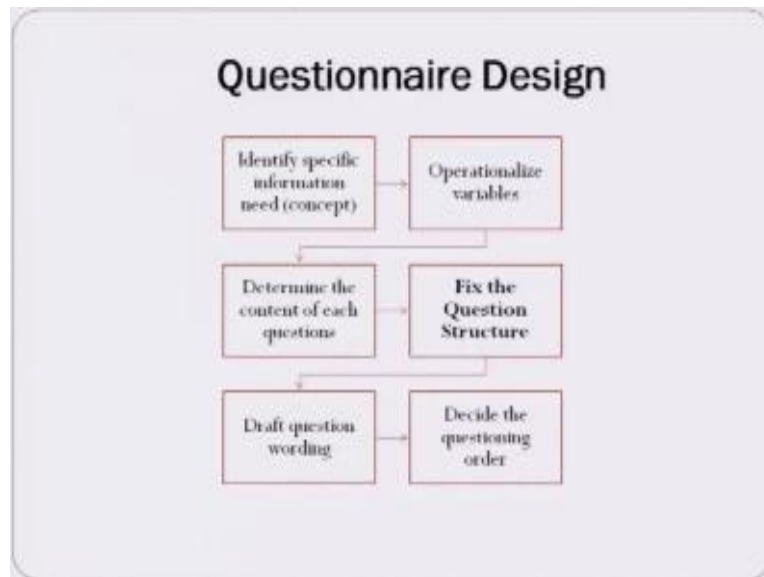
You will also see that they will also be recommending to the other customers about your product and these are basically certain things that help you in understanding what is the level of customer loyalty. So these will basically help you to understand.

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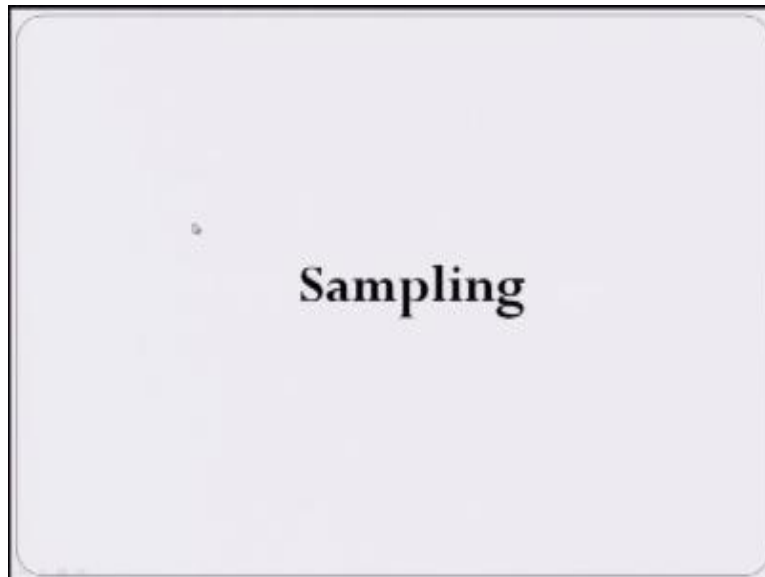
Dr. Shashi Shekhar Mishra: Or frame the question and the content of those questions. Then you basically fix the question structure, how you are going to frame the questions and then what will be the order of the questions that you are going to ask, generally you ask the general information related questions at the beginning and then you ask specific information at the later stages of the questionnaire.

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Dr. Shashi Shekhar Mishra: You drop the wordings of the questions and then decide the questioning order, that is what I was talking about, so this is the, this is how the questionnaire design goes on.

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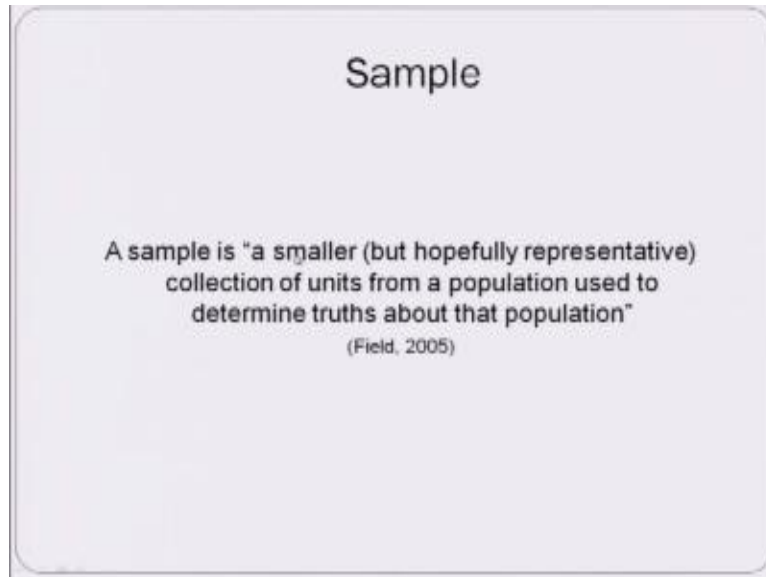


Dr. Shashi Shekhar Mishra: Once you have designed your, based on your information needed when you have designed your questions then you have to basically go and administer that questionnaire or research tool in the basically the, among the, the population or the target respondent, so for that basically we have the sampling.

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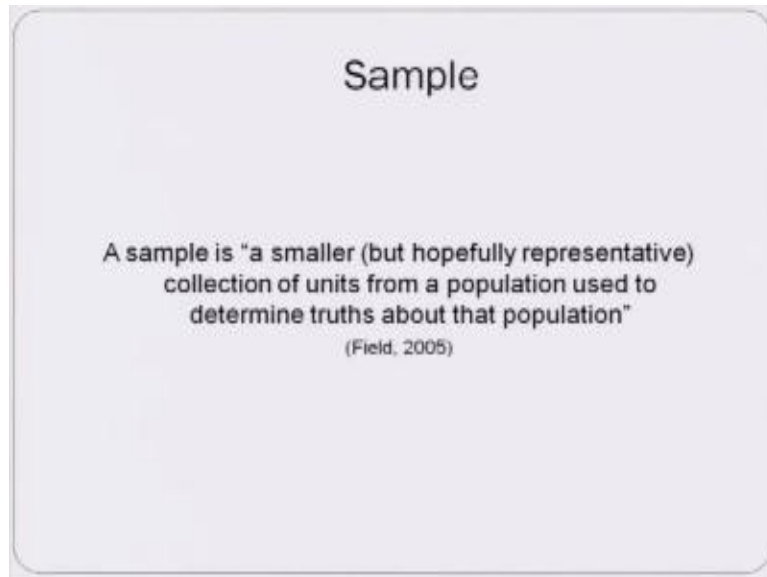
Sampling

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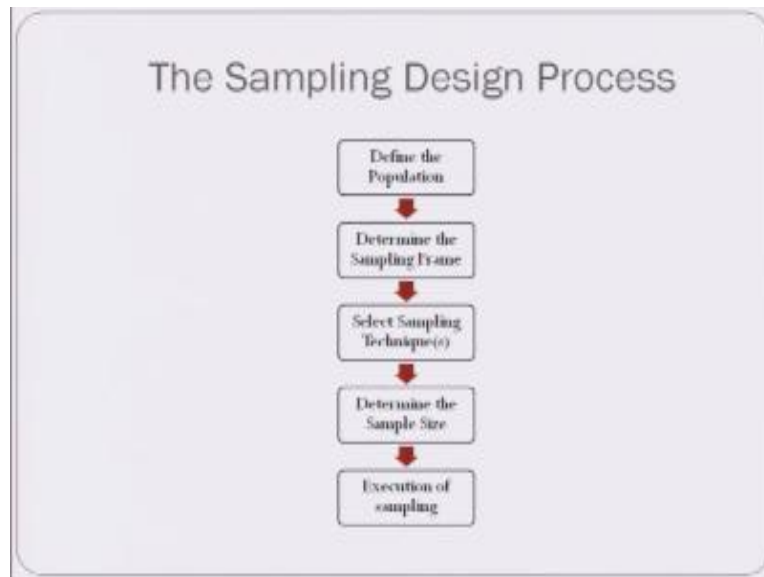
Dr. Shashi Shekhar Mishra: Sampling process in place, what is sample is, sample is a smaller but hopefully representative collection of units from a population used to determine truths about or the information about that population. So basically you will see that sample is basically a subset of the population, it contained the units that are representative of the sample has to be representative of the population and you want to measure the population's property by studying the properties of the sample. So another way of looking at this sample is that.

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Dr. Shashi Shekhar Mishra: It is a basically a sub set and it should be representative of the population.

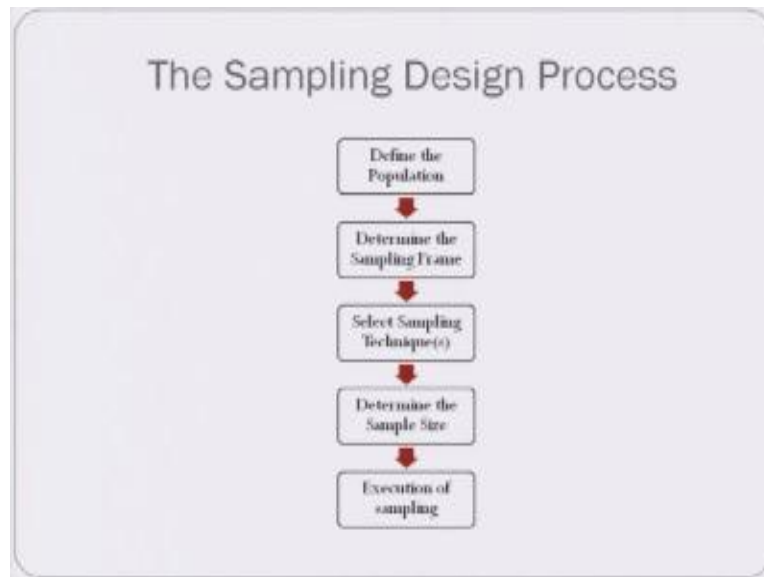
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Dr. Shashi Shekhar Mishra: So once we have understood what is sample, we need to understand what is the sample, sampling design process. Sampling design process involve these steps as shown in the slides you can see, you define the population first and then you determine what is the sampling frame. Sometimes you will find out that or many times you will find out because of the resource constraint or because of the various factor, you cannot basically perform or you cannot ask or you cannot collect the information from the entire population, that might not be feasible thing.

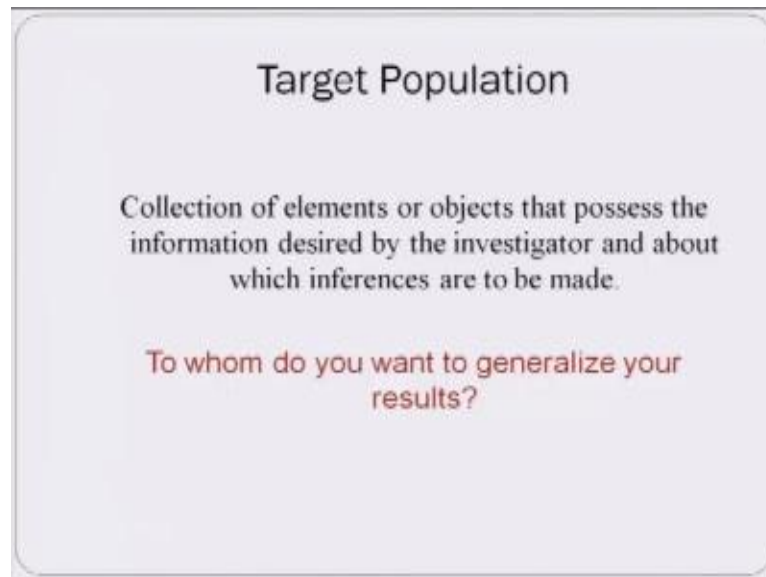
On the other side you may also come across a certain situation, where you have to or you have to cover the entire population, so there the census survey will be required. Now so the cases where probably you have to draw a sample.

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Dr. Shashi Shekhar Mishra: You have to first do the thing was, you have to determine the sampling frame and then you have to decide the sampling techniques, after that you have to determine also the size of the sample that is necessary or minimum sample size the adequate sample size which is required for this study to draw any conclusive or any statistically important inferences. So then you have to perform after that the execution of the sampling process. Now you see that what is target population here, now in this case the first step was to determine the target population.

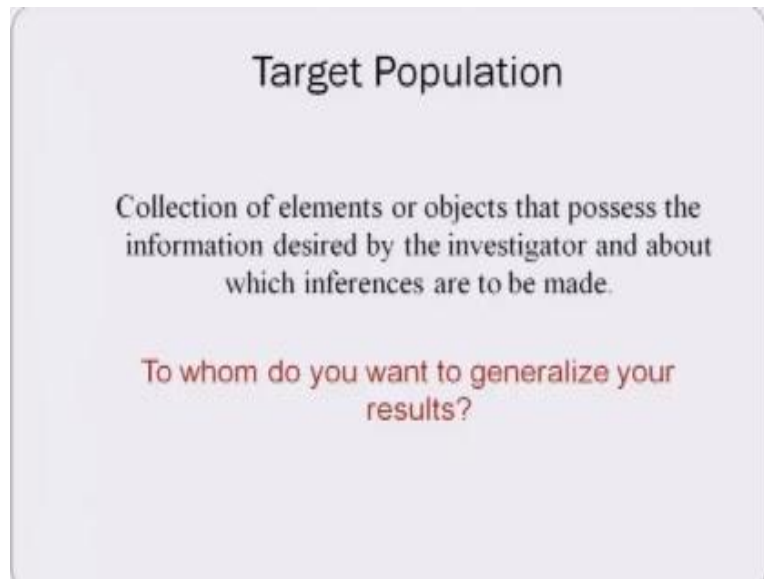
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Dr. Shashi Shekhar Mishra: So one very simple way of understanding what is your target population is, you ask yourself like to whom you want to generalize your result, so if you want to basically in this case, for this course if I am trying to understand, I am trying to do the study in a class so I will say that I want to generalize my results to the whole class. It may also happen that I might do some study on the, all the courses of NPTEL. So you will find out there my population will be all the participants enrolled across all the NPTEL courses.

So you see the, the two population definition are differing, if I am doing a study which is related with a student of this course that is marketing management part 1, then it will be only the, the student 5625 registered in this course. On the other side if it, if I talk about in ongoing semester across all NPTEL courses I want to do some kind of studying on the participants. So my population size will be all the participants who are enrolled in this course. So the formal definition of the target population that you can understand is these collections of elements or objects

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Dr. Shashi Shekhar Mishra: That possesses the information desired by the investigator. So corresponding to the information that you require whom so ever contains that information who, whichever objects or the elements contain that information is part of the population and about which you have to make the inferences. So the next

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Census vs. Sample		
	Census	Sample
Population Size	Low	High
Cost	Lower	High
Time Needed	Less	High
Variance in the characteristic	Small	High
Cost of sampling errors	Large	Small
Cost of non-sampling errors	Small	High
Nature of measurement	Non-Destructive	Destructive

Dr Shashi Shekhar Mishra: Thing here what we need to understand here is that whether we are going for a census survey or whether you going for a sampling based on a smaller scale survey

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Census vs. Sample		
	Census	Sample
Population Size	Low	High
Cost	Lower	High
Time Needed	Less	High
Variance in the characteristic	Small	High
Cost of sampling errors	Large	Small
Cost of non-sampling errors	Small	High
Nature of measurement	Non-Destructive	Destructive

Dr Shashi Shekhar Mishra: That is sample based survey, so there is a certain things which we will guide you to understand that you should go either for census or you should go for the sample. You will find out where the sample size is the population size is low, so there probably it is feasible to conduct a survey across all the population elements or the units of analysis in that case. So probably for this course and since this course it is we have all the data about all the participant in this course and they are, they can be easily through basically the online methods.

Probably even in this case the census survey is possible, one way one example where one area where you will see that census is basically there is no alternative other than census is that the policy-making issues, where the government has to make the policies in many of the places the policy making, the policies are decided, are made based on the census data rather than basically a sample run.

So you will find out that is another area because they, because of the kind of objective of those programs of the government they have to be inclusive and they cannot eliminate a part of the population so they have to go for the census survey, another thing is that

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Census vs. Sample		
	Census	Sample
Population Size	Low	High
Cost	Lower	High
Time Needed	Less	High
Variance in the characteristic	Small	High
Cost of sampling errors	Large	Small
Cost of non-sampling errors	Small	High
Nature of measurement	Non-Destructive	Destructive

Dr. Shashi Shekhar Mishra: When the cost of doing the sampling and the data collection is low then probably if it is exceptionally low or it can be obtained at no cost probably like in this case all of you can be send some questions or some kind of study can be just sent to all of you through an e-mail so that there probably, and if it is through an online you will find out that, you will find it very easy to collect the data and instantaneously probably people can respond to that, so the time needed is also low then probably also we can go for the same this census wasting.

However in most of the marketing research project you will find out the cost of the sampling is very high. The agencies which are involved in the data collection process, the time required to administer the questionnaire and then probably collect the data is very high in terms of both the cost and the time. So there you will find out there sampling is more preferred, you will find out whether the, some of the other things like which are related with

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Census vs. Sample		
	Census	Sample
Population Size	Low	High
Cost	Lower	High
Time Needed	Less	High
Variance in the characteristic	Small	High
Cost of sampling errors	Large	Small
Cost of non sampling errors	Small	High
Nature of measurement	Non-Destructive	Destructive

Dr. Shashi Shekhar Mishra: More of the statistics is the variance in the characteristics, cost of sampling errors, cost of non sampling error. Based on that also you can decide whether you can go for the census or the sample base thing. Now I will end my session at this point of time and when we will start in the next session we will carry forward from this place and we will complete this sampling process and then we move into that data collection and the data analysis part. In rest of the sessions, rest of the remaining session of this module on this capturing marketing site and the marketing research process, so thank you very much for session.

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