4.3.4. S	elf- Test Questions	51
5.0. Sam	ple Selection	51
5.1. Oł	bjectives	52
5.2. Ur	nit of analysis	52
5.2.1. P	Population	53
5.2.2. S	Sampling	53
5.2.3. T	he Sampling Process	55
5.2.4. S	Sampling Designs:	56
5.2.5. S	Sample Size determination	59
5.3. Su	ımmary	60
5.3.1.	Note	
5.3.2.	Activities	
5.3.3.	Further reading	61
5.3.4.	Self-Test Overtions	61
6.0. P ta	Cerection	62
6.1. Oł	bjectives	62
6.2. Ty	pes of Data	62
6.2.1.	Secondary Data Sources	63
6.2.2.	Primary Data Sources	63
6.3. Da	ata Collection instruments	67
6.3.1.	Questionnaires	67
6.3.2.	Interviews	72
6.3.3.	Focus Group Discussion	73
6.3.4.	Projective Techniques	75
6.3.5. T	-ests	

6.3	.6.	Document Analysis	76
6.4.	Sum	nmary	77
6.4	.1.	Note	77
6.4	.2.	Activities	77
6.4	.3.	Further reading	78
6.4	.4.	Self-Test Questions	78
7. Tes	ts of s	Sound measurement and levels of scale	79
7.1.	Obj	ectives	79
7.2.	Con	cept of measurement in research	80
7.2	.1. Me	easurement process	80
7.3.	Leve	els of measurement of scale	81
7.3	.1.	Classifications of scaling techniques	83
7.4.	Mea	asures of Sound Measurement	87
7.4	.1.	Characteristics of neusures of sound measurement	87
7.	75	Clivity P39	89
7.4	.3.	Reliability	92
7.5.	Sun	nmary	93
7.5	.1.	Note	93
7.5	.2.	Activities	94
7.5	.3.	Further reading	94
8. Dat	a Ana	ılysis	96
8.1.	Obj	ectives	96
8.2.	Mea	aning of Data Analysis	97
8.2	.1.	Process of data analysis	97
8.3.	Dat	a Analysis for Qualitative Research	. 100

1.7. **Summary**



Marketing research can also be seen as the process of systematically gathering, analyzing and interpreting data pertaining to the company's market, customers and competitors, with the goal of improving marketing decisions.

There are various categorizations of research. It can be basic or applied, quantitative or qualitative; and based in the purpose; it can be exploratory, descriptive or causal.

There is a strong link between marketing research and marketing management, since research is done to aid decision-making.

For any research to be successful, it must be cost effective, timely and ethical

1.7.1. Note



You should note that, Marketing research is an important component of the marketing information systems.

1.7.2. Activities



Consider all the products and/or services offered by your organization (or any organization of your choice). For those products /services with the lowest market share, discuss how marketing research could be useful to help improve the market share.

3.6. Marketing Research Objectives

Every research should have defined and explicit research objectives which clearly state why the research is being done. All other aspects of planning and carrying out the research flow from these objectives. Meaning, all aspects of the research design, sampling choice, target respondents, data collection instruments, and questionnaire are determined by the choice of objectives.

The marketing research objectives should relate to the marketing decision. The objective of the research could range from helping a company improve its satisfaction ratings among consumers, to finding new markets for its products. Hence marketing research objectives are the refined research problems that specify the management problem that the research aims to investigate. For instance, if a company is struggling with stagnant sales (marketing management problems); the marketing research problem would be to establish products lines that have stagnant sales; from which, various research objectives can be formulated as relates to the various products lines to seek for reasons for the stagnant sales among them.

The research objectives could therefore; break down specific aspect of the product line to establish which of those aspects has the greatest impact of sales. These aspects could include: price of the products, promotional techniques using tell by each of the product lines, the market segment of the specific product lines, the brane image of the various product lines etc.

Hence, whereas them ark ting research problem if the narrow concept of the marketing management problem, the receiver bestives are the specific measurable aspects of the research problem. To write out clear objectives, a marketer needs information about the background of a problem. This can be found from internal reports such as sales reports, complaints statistics, and customer service feedback forms.

4.2.1.1. Approaches in conducting exploratory research

Exploratory research can be conducted through various ways:

- Secondary data reviews
- Experience surveys
- Ethnographic surveys
- Focus group discussions
- In-depth interviews
- Projective techniques
- Case studies

Secondary data reviews: This refers to a comprehensive search through secondary data sources and should include an examination of conceptual literature, trade and prolished statistics. It gathers both internal and external data. Internal data would include transport costs, sales costs, advertising and other promotional expenditors, sales performance data. External data can be gathered from government statistical yearbooks, bulletins, journals, or trade association reports. Secondary data can be and the secondary data two major perefits: it is time saving and less expensive, especially with the 18 of computerized latabanks.

Experience arvey: expert opinions. This is applied in defining the marketing problem where the researcher organizer in order a large problem in talks with a group of resource people who can offer a wealth of information. It focuses on experts in the industry, or people with experience in the field. The purpose is to help formulate the problem and clarify concepts, hence probability sampling is not required, but purposeful sampling to eliminate inarticulate people. Such a survey utilizes company executives, users or consumers of the products, retailers and wholesalers.

Ethnographic survey: This is in situation where the inquirer interested in peoples' behavior chooses to explore the behavior of the target group in the natural settings. For instance, marketers interested in studying the buying habits of their customers can set up CCTV cameras to observe the customers making purchase decisions in the natural setting without any interventions or obstructions by the researcher.

Focus group- This is applied in defining the marketing problem where the researcher organizes informal talks with a group of resource people who can offer a wealth of information. It focuses on experts in the industry, or people with experience in the field.

The purpose is to help formulate the problem and clarify concepts, hence probability sampling is not required, but purposeful sampling to eliminate inarticulate people. Such a survey utilizes company executives, users or consumers of the products, retailers and wholesalers.

Focus groups are best for studies that aim at new product development, positioning, targeting, and segmenting strategies, habits and usage studies, packaging assessments, attitude studies, advertising evaluations, promotional techniques evaluations, and idea generation.

Focus groups are entirely qualitative research design technique and hence cannot be used to collect quantitative data on sales prediction etc.

In-depth interviews- This is a special form of focus group discussion in which one, and only one participant takes part in the discussion session with the interviewer. The same, relatively free ranging qualitative interviewing technique is uses as in focus group discussion. These unstructured one-on-one interviews are intended to discover deep-seated motivations are on-one interviews that probe and elicit detailed answers to questions often using clinical nondirective techniques to uncover hidden motivations. Clineal condirective Techniques refers to the interviewer following the subject $\frac{2}{2} \frac{1}{2} \frac{1}{2}$

The method is normally applied in situations when there are difficulties in assembling the desired participants (e.g. traveling business people) at specific time and place.

Projective techniques- Ways of tapping respondents' deepest feelings by having them "project" their own feelings onto unstructured situations. Include all indirect means of questioning that enable a respondent to project beliefs and feelings onto a third party, onto an inanimate object or into a task situation.



This topic discusses ways in which researchers can selected samples from various types of population. Since, research is a tedious, costly process, it is important that researchers identify ways of selecting representative samples from the population so as to make generalizations about the populations from the selected samples. The extent of generalization is however, dependent on the characteristics of the population. In instances, where the population is finite, meaning that the number of people making up the population is known, the researcher can use probabilistic sampling techniques that provide everyone a chance of being selected unlike in infinite populations in which members of the population are not known. For such cases, the researcher must use non-probabilistic sampling technique meaning, that the choice of respondents in the sample is subjective and depends on the purpose of the research, the convenience of the researcher to the selected sample or may rely on referrals to select the samples.

5.1. **Objectives**



Unit of analysis 5.2.

In identifying the choice of respondents, every researcher must identify the unit of analysis. A unit of analysis refers to the entity that is under investigation. It is the

5.3. Summary

Sampling is very important step in the research process, it can make or break the research process. This is because, the choice of respondents to be included in the sample, determines the validity or reliability of the data findings. Sampling techniques are of two categories: probability and non-probability techniques. Probablity sampling every member of the population has an equal non-zero chance of being selected, whereas in non-probability sampling, not every member has an equal chance of being selected.

5.3.1. Note

The population chracteritisics, type of research lesion selected anothe type of analysis to be used are core-determinants in selected view to use probability and non-probability sampling technqiues. Researchers uses that every effort to real limit a sampling error and sampling bias that occur due to researchers choices is searchers can minimize sampling errors by increasing the sample size and they canonic the sampling bias by adopting scientific means of drawing representative samples from the population

5.3.2. Activities



From the identified research problem, identify the ways in which you can draw representative samples through the probability sampling technique

6.0. Data Collection



In order to respond to the research questions, data has to be collected. This topic discusses ways in which data is collected from the selected samples. The collected data must be reliable and valid in responding to the research questions. This lecture will introduce the learners on the various types of data and discuss various ways in which data is collected and ways in which researchers ascertain that the collected data is reliable, practical, and valid. Data is a key part of the research plan and often represents the biggest cost in primary research. The procedures and devices used to obtain primary data vary depending on the sampling and measurement requirements.



6.2. Types of Data



There are two basic types of data: primary and secondary data. Primary data is data generated from a survey, observation, or experiment. It is first hand collected data to solve the underlying research problem. Whereas secondary data is mostly collected through document reviews that were previously gathered for some other purpose other than the current research problem under investigation.

6.2.1. Secondary Data Sources



Secondary data in market research can be sourced from internal sources or external sources. Internal sources refer to the secondary data that is already contained in the companys datases that can be used to analyse a situation. It includes, data from the sales invoices, receipts, stock inventory logs, balance sheets, profit and loss statements, company's minutes, etc.

Whereas external sources refer to the secondary data that collected by other individuals or organizations on behalf of the organization. Companies can gather secondary data from other third party sources such as research firms that periodically collect data on consumers, consumer watch documentaries, newspaper articles etc. mostly this data is gathered by the organization to enable inform it on marketing intelligence. Companys can source for information about their strongest competitors through accessing their financial statements on the newspapers if it is a pulicly listed company etc.

6.2.2. Primary Data Sources

m Notesale.co.U Motesale.co.U 118 an be <u>s</u>ou d through observation, content analysis, Primary data in mai nd mail surveys. human s ic in ouiry,

Observation research- this refers to simply observing the consumers without communicating with them. It is a systematic process of recording the behavioral patterns or events of people, objects, and occurrences without questioning or communicating with them.

For observation to be a valid way of collecting data, it must ascertain the following conditions: the desired information should be in such a way that it can be inferred from the observations of the subject behavior, the behavior must be of interest, frequent, repetitive, or predictable and the behavior of interest must be of relatively short durations of time.

Observation research approaches can be of five types: natural versus contrived observation, disguised versus undisguised observation, structured versus unstructured observation, direct versus indirect observation, and human versus machine observations.

Shopper Patterns - refers to drawings that record the footsteps of a shopper through a store. They show the flow of a representative sample of shoppers through a store. Also used to study the effect of music on shopper behavior. For instance, it has been found that slow music makes them stay longer and buy more.

Trace analysis - refers to data based on physical traces of past behaviour such as what newspapers people read, cooking fats used (gathered through garbage research).

Content Analysis - A technique used to study written material, usually advertising copy, by breaking it into meaningful units, using carefully applied rules. Content Analysis attempts to determine what is being communicated to a target audience by objectively and systematically describing the communication's content.

Humanistic Inquiry - A method of inquiry in which the researcher is immersed in (becomes a part of) the system or group under study, rather than using the scientific method of standing apart from the system being studied. Humanistic inquiry is a non-empirical method increcording and analyzing market phenomena using two diaries (or logs) supplemented by participant observations using audiotape or videotape recordings, anticated e.g., shopping lists or garbage), and supplemental documentation (e.g., magazire acticles, health ecords, survey data, or census reports).

The theory-construction diary is used to loc thent in detail the thoughts, premises, hypotheses, and revisions in thir case developed by the researcher. It shows the process by which the researcher has come to understand the phenomenon being studied.

The methodological log contains detailed and time-sequenced notes on the investigative techniques used during the inquiry, with special attention to biases or distortions a given technique may have introduced. Outside auditors then judge whether interpretations are made in a logical and unprejudiced manner from the data gathered and the rationale employed. They review everything gathered and put in diary in order to confirm or disconfirm that the conclusions reached do flow, in fact, from the information collected, and not by the biases of the Humanistic research.

ii. Machine Observation Types:

Mechanical gadgets are used for monitoring. These include *Traffic Counters* -machines used to measure vehicular flow over a particular stretch of roadway, scanners in supermarkets, pedestrian turnstiles, people meters attached to TVs to monitor viewership, or even videotaping customers in stores.

7.3. Levels of measurement of scale

There are four levels of measurement: nominal, ordinal, ranked, and interval. The primary purpose of classifying the variables according to their level or scale of measurement is to facilitate the choice of a statistical test used to analyze the data. There are certain statistical analysis which are only meaningful for data which are measured at certain measurement scales, for instance variables such as gender have dichotomous responses who are either male or female, for such data, the only possible type of analysis is mode and median because the data is categorical and not continuous in nature.

Nominal Scales - scales that partition data into mutually exclusive and collectively exhaustive categories that may be either equal or not equal. They produce non-metric data, such as male (1) and female (2) that simply identifies objects, events, or groups.

It employs a figurative labeling scheme in which the numbers serve only as labels or tags for identifying and classifying objects. In marketing research, nominal scales are used for identifying respondents, brands, attributes, stores and other objects. For example, respondent income in city A classified into three groups: the highest income group as group 1, the middle income group as group 2, and the low income group as group 3. The mode is the measure of central tendency.

The numbers have no arithmetic properties and act only as labels. The only measure of average that can be used is the mode because this is simply a set of frequency countral violations tests can be carried out on data collected in the nominal form. The most likely would be one chi-square test. However, it should be noted that the Chi-square is a test to determine whether two or mole variables are associated and the strength of that relationship dt carrie line thing about the form of that relationship, where it exists, i.e. it is not capable of establishing cause and effect.

Ordinal Side: are nominal traces hat also order the data so that they determine which objects are greater or less than the other. They produce non-metric data that provide information about the relative ranking of some characteristic possessed by an event, object, or group, such as quality ranking, social economic class, and so on.

For instance, ordinal scales show preferences for each item in a list of attributes about an object, and those preferences are ranked in order of importance to the respondent.

However, the amount of difference between responses is unknown. We know only that one item is more important than another, not how much more important. In marketing research, ordinal scales are used to measure relative attitudes, opinions, perceptions, and preferences. Measurement of this type include "greater than" or "less than" judgments form the respondents. For example, Company X has three main products: A, B and C. Based on turnover, product A ranking is number1, product B is number 3 and product C is number 2. The Mode and the Median are both used as measures of central tendency.

An example of an ordinal scale used to determine women's preference among five brands of washing detergent would be as follows:

7.4.2. Validity

Validity can be estimated using various techniques: Face validity, content validity, construct validity, concurrent validity, and predictive validity

Face Validity

This is the degree to which the instrument "seems" to measure what it is supposed to. This is a judgement call by the researcher, which was actually made before measurement as the questions were designed. However, we usually want to create measures that go beyond our "feeling" that our measures of some concept are valid. Thus, there are three "direct" assessments of the validity of a measurement instrument i.e. Content Validity, Criterion-Related Validity, and Construct Validity.

Content validity

This is the measure of the degree to which data collected using a particular instrument represents a specific domain of indicators or contents of a particular concept. It provides adequate coverage of topic under study.

Construct Validity

This is a measure to the degree to which data obtained from the instrument meaningfully and accurately reflects/represents a theoretical concept. It is the extent to which an instrument has been accurate in measuring what it ought to measure.

Concurrent Validity

Concurrent validity is a statistical method to measure validity using correlation coefficients. Rather than the logical methods of identifying experts to estimate the validity this find of validity, evaluates the results of the pilot study against the actual results of the Group to find out the degree of association between the findings. The stronger the correction of accordation, the group the concurrent validity. **Predictive or criterion-related Validit**

This refers to the use of a measure in assessing (1) jects behavior in specific situations for predictive purposes. It is similated concurrent validity (1) instance, if an instrument measures customer satisfaction a customer who is they to be satisfied, or who scores high in customer satisfaction, most likely scores high in customer loyalty.

Apart from the various ways in which validity can be estimated in a study, there are two main types of validity: Internal Validity and External Validity

1. Internal Validity refers to the question of whether the experimental treatment is the sole contributor of the observed changes in the dependent variable.

Good internal validity suggests that the experiment (or treatment) actually produced the differences observed in the dependent variable, not by other causal factors, so that the results "of this single test" can be trusted. It refers to the extent to which changes in the dependent variable were produced solely by the independent variables and not extraneous (other) variables.

2. External Validity - The extent to which causal relationships measured in an experiment can be generalized to outside (other) persons, settings, and times.

Good external validity suggests that the subjects and the setting of the experiment are similar to that of the population of interest so that the results can be projected to (generalized to) the population of interest. External validity specifies the time, setting, and persons that the results can be generalized to. For results to be generalizable, it is important that the subjects chosen as the study respondents are representative of the population

Generalizability refers to the extent to which one can generalize from the observation at hand to the universe of generalizations. The set of all conditions of measurement over which the investigator wishes to generalize is the universe of generalization. These conditions may include items, interviewers, and situations of observation. A test-retest correlation is concerned with whether scores obtained from the measurement scale are generalizable to the universe scores all time of possible measurement. Even if the test-retest correlation is high, nothing can be said about the generalizability of the scale to other universes. To generalize to other universes, generalizability theory procedures must be employed.

7.5.2. Activities



8. Data Analysis



This topic discusses the various ways in which the data collected can be analysed. After data has been collected it is classified as either quantitative or qualitative data. Quantitative data is the numerical data that can be computed statistically whereas qualitative data is thematic data that is collected through words, images, captions etc. This kind of data can only be analysed by organizing the words or images through content analysis. After analysing the content, the researcher identifies themes that cut across. Market research data analysis is therefore a blend of statistics, psychology, information technology, literature and art. A marketing researcher is not expected to have a complete understanding of all the data analysis techniques, but is expected to manage the blend of these disciplines in order to develop and organize a complete 8 analysis of the data that satisfies information require the project

Objectives 8.1.



By the end of the lecture, you should be able to:

Determine the main elements of a data analysis plan

Describe the factors influencing the selection of the data analysis strategy

Describe the correct procedures of calculating descriptive and statistical inferences

8.2. **Meaning of Data Analysis**

Data refers to a collection of facts and figures relating to a particular activity under study or investigation. Thus, data analysis may be defined as the whole process, which starts immediately after data collection and ends at the point of interpretation of the processing results. The whole process includes data sorting, data editing, data coding/variable generation, data entry, data cleaning, data processing and interpretation of results.

8.2.1. Process of data analysis

Once data has been collected it has to be processed and analyzed in accordance with the research design adopted if quantitative or qualitative research design. The following are the steps involved in data analysis

1. Data sorting

This involves the rearrangement of the collected data/questionnaires to bring about order blowing systematic handling and storing of raw data. It is actually the beginning of detection, and otesale.C avoidance of errors occurring as a result of mix-ups.

2. Validation and editing

Validation is the process of ascertaining that it terviews were actually ucted as specified. It is done to determine the validness (herre thessoof the jeterniew or dess.

Editing is the protessor scertaining that constitutionaires were filled out properly and completely. The d area ing errors (both respondent and interviewer mistakes) purpose of editing is detecting an

Attention is paid to the following:

i. Missing data-This could result from the loss of a source document, failure by the interviewer to ask some questions, or failure by a respondent to answer the questionnaire at all. This can affect validity and reliability, and may also cause computation difficulties. Some of the strategies of dealing with missing data include:

Ignoring the missing data in the analysis-if the data existence is unrelated to any other variable or study object characteristic.

Completely eliminate a case (questionnaire) containing missing data from the analysis. This is only recommended when a case has more than 15% missing data. This can however affect sample size. Computing a value wherever missing data occurs- can give a random number (up to 10% of the cases with missing data on a variable), imputing the typical value

(mean, mode, median) of all the cases, or identify a similar case to the one possessing missing data and impute the same value found in the similar case.

ii. Consistency-Ensure that skip patterns were correctly followed. Also check for consistency in responses.

The following categories (groups) might be developed: Code

- 1. Lack of colour-responses 2, 4, 8.
- 2. Amount used -responses 1, 5.
- 3. High price-responses 7, 9.
- 4. Texture problem-responses 3, 6.
- 5. Advertising appeal-response10.

4. Data entry

This refers to the process of physically entering numeric values into the computer. This is normally done directly from the questionnaires. Sometimes the data are first transferred to a computer-coding sheet, but this often creates errors in the transferal process that may not be caught and corrected. Data entry requires a high degree of keenness and patience in order to get representative and relevant t results at the end. This is where the GIGO (Garbage In Garbage Out) principle must be put in mind at all times to avoid writing a report based on Garbage Results.

There are two types of data entry:



a. Intelligent Data Entry Systems (Devices)-refers to the logical checking of information by the computer as the data is entered into the entry device (computer), which is programmed to check for and avoid certain types of common errors at the point of call centry. Such errors include invalid or wild codes and violations of skip patterns. Sometimes a second computer is a coched to the data entry device to perform this checking routine:

b. Dumb Data Entry in Sistable, there is no autor and checking by the computer. All checks are done manual way of the entry personnes and the scearcher in an iterative fashion to eliminate all data entry errors.

5. Cleaning of data

This involves conducting a final check on a data file for accuracy, erroneous data, completeness and consistency. This final validation check of the data is absolutely necessary to avoid having to come back to the original questionnaire or raw data too many times to correct errors when you are in the middle of the analysis. Descriptive or exploratory procedures can be used to help identify errors in the data before settling on the actual analysis. If a checking program is available, a final computerized error check of tabulated data is then performed using Error Checking Routines. These are computer programs that accept logic instructions from the user to check for errors in the data. The routines check for the presence of various conditions that may have been violated.

6. Data Processing

This involves the proper selection of the analytic procedure and subsets of data that are to be used in particular analyses; selection of the final versions of the variables to be used; decisions about what statistics are to be calculated; setting up the runs to produce these statistics and eventually submitting the setting to the processor for computation/processing.

9. Marketing Research Report Writing



This topic concludes the market research process. As seen in the previous chapters, market research goal or outcome is to finally develop a workable research report that outlines strategies to be used in the organization. Hence, it should be prepared in a manner that communicates to the intended audience.

9.1. Objectives



9.2. Importance of the report



The results of a marketing research project need to be put down in a report for various reasons:

• The results of marketing research are often intangible (after the study, there is very little physical evidence of resources used (such as time and effort that went into the research project). The report is the only documentation of the research.

• The report will thus communicate the research results, conclusions and recommendations in a clear and concise manner.

• The research report is the only aspect of the study that marketing executives are exposed to. They will therefore use the report to evaluate the project, and their evaluation will to a large extend depend on how well this information is communicated.

• The research report will also help determine whether a particular researcher will be used in the future or not.

• It also serves as a source document for future reference.

9.6. Qualities of a good research report

The Advertising Research Foundation has developed guidelines for reading the research report and evaluating the research project. The research report should:

• Address the problem- it should not assume that the reader has prior knowledge of the problem situation, but should give all relevant information.

• The research design should be clearly described in non-technical terms.

• Execution of the research procedures should be well laid out. Qualified people under proper supervision should do this execution.

• The report should make proper use of numbers and statistics that are not misleading to readers.

• Findings should be reported in an objective and candid way. Any assumptions made in the interpretation should be clearly identified. The report should also discuss any limitations, and should avoid making any conclusions or recommendations without the specification of the underlying assumptions.

• It should clearly specify the target population to which the findings will apply.

• The report should be written with the spirit of honest and complete disclosure of research procedures and results.

9.7. Summary

w from Notesale.co.u h peage 117 of 118 At the ind of the research poce, we researcher needs to communicate his findings by way of a report and/or oral presentation.

Depending on the target audience, the researcher can write either a technical report or a popular report. Popular reports are meant for use by many readers, including managers, and hence should be easy to understand and interpret.

9.7.1. Note



The research report should always be written the target audience in mind. It should be written in a manner that communicates what is important to the target audience.