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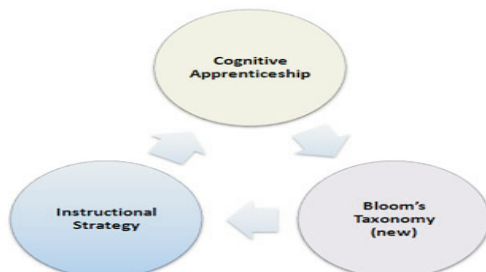
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Learning Design Framework



STRATEGY TO REACH THE ACCURATE ANALYSIS

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ABSTRACT :

Resolution of the chapter in brief is that it is one of the handy tools for the present and future researchers. Though it isn't has a legal background (i.e. Notification or Act etc.) still the workout will help as a summarized directive (instant weapon) for the academic staff to use or rather implement wherever required; and wherever seems fit to analyze from the ground work.

Remainder in brief for the chapter is that it includes all the details from ideas of research that breed in one's mind followed by designing, selection of sample size, strategic planning, construction of questionnaire and fitment (validity in statistical terms), and access to literature concerned. Final part of the chapter is about selection of statistical techniques and analysis of quantitative and qualitative data followed by summary for preparation of the final results.

KEYWORDS : Designing a Frame Work, literature

review, Sampling, Questionnaire, Pilot Study, Quantitative & Qualitative Analysis and Case Study.

INTRODUCTION

Analysis of research is based on three factors involved in mind of the researcher. These are; pre-determined analysis, creation of hypothesis and the results occurring thereafter. In practical, beginning does not take place to one's liking or assumptions. The results keep fluctuating (in one's mind) while reviewing literature and collection of the primary data. However, in case of secondary data analysis, this does not happen so. Boden, Kenway and Epstein (2005) had written that in certain cases you disagree with that you read, heard or listened and it creates interest within you in accordance to your imaginations. Therefore, initially it is quite important to know purpose and area of research to the depth possible.

DESIGNING OF A RESEARCH WORK / PROJECT

Designing of research depends on your topic, synopsis, main objectives (also specific, if any), survey area (or analysis of any organization / historical data), research plan, hypothesis created, selected statistical techniques and assumed results. Spector (1981) suggested that any of the scientific investigation; either social or natural essentially should begin with structure or plan. The very purpose of your design should be to explore the unreturned questions in area of your study. All designs are based on area of your study, need of the set objectives and type of data being retrieved, collected and organized. Basic necessities are that you have to be in possession of self-created research questions. Execution of research plan should take off with pre-test or so called pilot study and finally must land with post-test to rectify coverage and content errors. There are statistical tools in structure equation modeling for reinvestigation of your data results. There are certain conditions for pre-test in regard to coverage and quality assurance for data collected; it depends on your area and supervisor directions.

Your subject, ideas, information collected and its interpretation along with suggestions is finally going to be a useful research for the benefit of

mankind. This should be flow of ink for your successors too for expansion of yet hidden areas in their area of research through technical, working and other reports. So let's design your research!

You have to be very ensuring that designed structured questionnaire has plan for coverage of all categories selected for study based on their demographic characteristics. For example, if you are collecting data on religion wise minority population for gender basis; the variables (with codes) required are as shown in figure 1.

Table - 1

Variable	Category	Code	Variable	Category	Code	Variable	Category	Code
<i>Population</i>	Males	1	<i>Caste</i>	General	1	<i>Religion</i>	Hindu	1
	Females	2		Scheduled Castes	2		Sikhs	2
				Scheduled Tribes	3		Muslims	3
				Backward Class	4		Christians	4
							Budh	5
							Jain	6
							Parsi	7
							Others	8

Topic: Wonderful, your good self has selected a topic for research to meet the future planning needs. It is very clear that after getting selected for admission to research (Doctoral of Masters) you still have a chance to modify your title. Most of us avoid it, but the generous researchers who opting research only for the development purposes; once again go through it and suitably changes it to reach the directed sector. More easy is the topic; research is more complex. Never fear if level of research is less at present in selected issue, but must remember that simultaneously others at different locations are also actively working on it. So to be different from all, only thing the dedication is required to be extraordinary.

Synopsis: Startup of research depends on synopsis as it describes in detail the proposal and anticipated upshot of the study. Moment the questionnaire for field survey and tools for selection of secondary data are finalized, synopsis is overlooked except the objectives. Methodology proposed for sampling and analysis of data loses its strength if dependent and independent variables selected are not carried in properly for collection (primary) / selection (secondary) of data.

Objectives: The whole research project, its importance, implications and adoption by the planners and your successors depends on the aimed objectives to meet future needs of the society to be economically and politically strong (or in accordance to your title of your study). It should be assured that objectives set to derive the results are in tune to have positive impact on the society or any other development oriented purpose if any. Objectives are the third step in making research, and are the center point as build up strategy on the roots of subject selected and synopsis reaches to explore the issue. Rest all are build up parts of the entire research process.

Research Plan: No research plan can get formed to its final shape within the campus or research unit itself. To address the factual situation planning should start from the ground realities. Researcher needs planning with main goal and making its easiness in small goals; depending upon the type of data to be collected and expectation of results (quantitative or qualitative). This requires affirmative contribution in planning from desk to ground and ground to desk. There must be a draft plan likewise draft report as researcher prepares after completion of entire analysis work. This helps in telling us the level to which research has taken place in meeting the objectives. This gives a direction for deviation to take place accordingly. It will assist in preparation of the progress reports etc.

Hypothesis: Hypothesis is a way out to have estimation for the planned direction. It certainly can be very true in results, near to that or beyond. It is purely based on assumptions that either the relationship between the

variables exists or not. Hypothesis is simple as well complex too. Right before creation of hypotheses, verification at your level is needed to be confirmed that suitable techniques are available for later analysis of data according to build up hypothesis. To reach the available resources Goode and Hatt (1952) have suggested four sources of hypothesis, these are; general culture, scientific theory, analogies and personal experience. Hypothesis should be created after observing the extraordinary approach of the earlier research and expected outcome of your contribution in the present scenario. It should also be ensured that hypotheses are formulated in a way which expresses that either one or the other (alternate) is correct. The verdict finally should be accepted out of the case 1 or 2 to determine the accuracy.

Adaptability of Techniques: This is one of the most important part of research design as it is equally important to meet objectives because results of the targeted objectives is outcome from the techniques being used for analysis at present and further by the others in future. All the techniques aren't suitable for analysis of all kinds of data. Accessibility and adaptability of the same has to be decided to the possible extent in the beginning while preparing the synopsis. Conversion of data retrieved or collected into meaningful information for the generations and policy makers is the most important step in the entire process of research for analysis. Techniques should be adopted on the basis of type of data collected. However, suitability of techniques should be determined on the basis and type of research questions. Your research questions should cover the national and international agendas and also should satisfy inner interest that motivated you to start working on so.

To measure respondents views about their attitude on scale, numerous techniques are available. Each scale has its own importance. Though all techniques are applicable in measuring attitude but selection of these depends upon the nature of data to be collected, size and characteristics of the sample and inferences to made. In most of the cases for preliminary investigations, comparative scaling techniques such as paired and rank order are used; for non-comparing techniques like rating such as Likert scale, Semantic, Staple and Q-Sort scale techniques are used. However, for specific studies Semantic and Likert scale techniques are highly used.

In addition to the above, it has been observed that analysis through index value (to measure variables for quantitative data) at the maximum is used for business data analysis. However, the same can also be used for determination of any kind of data by calculating the values as '1' for yes alternates and '0' for no responses. It is useful for comparative analysis of two groups and data of two periods. Index value can also be used for measuring impact on targeted areas. Higher index value indicates that higher is the impact for selected objective.

Results: It is the final stage of the research prior to making out any conclusion or framing a set of recommendations based on the results, it is experienced that researches has three ways outs for analysis of data. First is that results appear as assumed after the pilot survey and meet the facts in agreement to objectives, research questions or hypothesis. These may or may not vary from the available studies; ultimately these results either support or do not support earlier investigations. Secondly, the results are near or similar to various studies available. Both the cases require post-test (or reinvestigation using statistical techniques) for identified places / literature to rectify coverage and content error at this stage, if any. Finally the results are total in reverse to the past researches as well to set research questions. This brings a stage of confusion to the researcher. Dire necessity about role and importance of hypothesis helps at this place in analysis of data. Results are to be accepted in tune to build up hypothesis and alternate hypothesis.

SAMPLING

Sample selection is quite intricate but as important as design. Sampling is a positive pattern to derive a sample from the population. Wrong selection of sample deviate the whole designed structure and data collection. As we know that combined groups in total are known as 'population'. However, selected part out of the group for survey and research analysis is called as 'sample'. Often homogenous sample is selected to meet natural identity of the objectives but selection of heterogeneous sample is sure to figure out different quality of data leading to qualitative results of your study. In case the population is heterogeneous, the complete unit is divided into several groups called as stratum. To be specific and systematic each of these is selected ensuring that

each stratum is homogenous to the possible extent and on the other side care is to be taken that composition is different as far as possible for two strata's. Often heard that sample should be representative. In this aspect Grafstorm and Schelin (2013) on the basis of previous and recent studies about sampling had written that the representative sample is a scaled-down version of the total population, covering different characteristics in the entire present population. In view of the above, suggestive steps for sampling are as written ahead.

Step 1: Selection of population having characteristics in tune to the selected variables and expectation from the available information (after data collection) for dedicated research questions.

Step 2: There is need to assume and establish (preliminarily) a relationship between the selected dependent and independent variable.

Step 3: Sampling should be an extract of the unidentified characteristics which earlier had not been covered.

Following above steps, initially it will crack to an intricate excessive brain exercise for adoption of sampling technique. This stage will take your good self for decisive action about selection of sampling for probability sample on the basis of degree of confidence specified and error estimated. On the other side sample selection on the basis of estimated instant selection, financial affordability and overall easiness in case of non-probability sampling. Probability sampling can be random, systematic, stratified and cluster sampling and non-probability sampling can be opportunity, judgement, quota, purposive or snowball sampling. Selection of these depends on the researchers view that data or information is being collected either from quantitative or qualitative point of view.

Planning in a Strategic Way

Be well prepared for inclusion of maps in advance. Though available maps can be used with research data (from research point of view) while acknowledging the same. In case there is necessity to re-use and re-publish the same map, process for obtaining the license from the publishing agency should be started in the beginning. For example, if a map published by Survey of India is needed, permissions to obtain license for its copyright through ministry approval takes about more than a year after submission of application with prescribed fee.

Preparation, Testing and Fitment of the Field Tools

Essentials Coverage in Field: Always write contact number with name of the respondents as it helps during analysis of data and interpretation of final results. This also assist to reach factual stage through communication by adding more information for which necessity arise for comparative analysis like before and after commencing of the project etc.

Pre-Test (or Pilot Survey): The results from the data collected while canvassing the questionnaire are tested in front of the Doctoral Committee of the respective Research Unit of the researcher. Beside this reliability test of the questionnaire is also mandatory for its effective and quality results. Reliability of the questionnaire can be tested through SPSS. Value of α should be equal or greater than 0.7 and at the same time value of α should also be below 0.9.

After this a need arises there to make changes in the questionnaire. Big organizations / agencies at the national and international have their fixed criteria on the basis of households and population in a particular zone for pre-test. In case of research of sample selected it depends on mainly the three cases. First the information is overloaded against certain questions, such questions should be classified accordingly. Secondly, information available is lesser than the expected, therefore it requires either to modify the set of questions or questions designed under various parameters should be clubbed. Lastly, it is possible that no information is canvassed through set questions in the questionnaire and is additionally available in the field. Restructuring of these questions is very essential in determining with the purpose to grab views of respondents for flawless information through questionnaire. At this stage, simplicity with alternative for open ended question should be added for scaled questions and if it is already on scale, scoring for the same will reach to certain extent.

Journey as a researcher from internally for any of the project should start with the feel of journalist as

they always have a motto to dig out the hidden facts and reach to explore the hidden facts. Digging out hidden facts in research is not discovery because its conclusion is drawn after analyzing the facts available.

REVIEW OF LITERATURE

Review of literature is foundation of the thesis or report on the basis of understanding and observance so far in the study area. It is advisable to study in depth at least 5 to 7 reports for quality improvement in the main body. Review of literature assist in ignoring the facts already available and development of new ideas to fill the existing gap. Timeliness of the entire research period is very important. At least previous ten years literature should be deeply studied for inclusion of latest ideas; however ideas and references of decades back can also be followed. Arrange year wise all relevant quotes of the authors. To safeguard your extensive labour on research, instead to get involved in tricks to get escape from plagiarism, write in own words. Quotes which are important should be properly acknowledged.

Preliminary Requirements: As preliminary and essential requirements are also there for presentations and publication of your papers, this exercise should also start along with review of literature and field work for better write up.

Search your Research: Beginning of literature review must start with dedicated areas directly related to research objectives/questions. Search tools essential for literature review and for this visit specific sites and resources related to your topic, as it will save your valuable time.

Utilization for References: Try your level best to reach actual data instead already published data under references as actual place provides more scope for additional ideas, sources and further resources.

Write up Literature Reviewed: All the dedicated and referred (acknowledged write i.r.o. of various authors) part should be in past tense. Start reviewing focused areas from social, legal and technical point of view for development depending on the subject. In all the cases, domestic issues of the area selected for study requires to be highlighted.

PREPARATION FOR DATA COLLECTION

Use of prepared structured questionnaire for data collection is a defensive tool of the researcher in the field. While preparing questionnaire, it should be ensured that:-

- vocabulary of the questionnaire is understandable to the respondent.
- there is continuity in sequence of the selected questions.
- questions itself should explore that type of data later can be quantified and has purpose for qualitative developments.
- all dependent and independent variables have been included in the schedule / questionnaire.
- it should represent academic values rather than emotional touch.
- questions regarding minority, religion and fertility should be intelligently handled.
- right person of the household / organization should be approached for collection of data.
- all questions should be under separate headings like; demography, health, education, profession and socio-economic indicators.

PREPARATION FOR DATA ANALYSIS

Each field has its own theory for data analysis and its interpretation using different (suitable) statistical techniques. If your area of research is social science, it is advisable that never finalize your data with the technique which is suitable for psychology, medical etc.

Coding: It is the utmost necessity before keying in any type of data for better analysis. Preparation of code list for analysis on different parameters is quite helpful while keying-in data. Open ended questions initially are without coding but it should always be anticipated that due to quality concern of study; coding for such questions (on the basis of classification described by the respondent; may be like scale information) should be carried out. Best use of coding is observed for testing of reliability of questionnaire and also while analyzing statistical results by adding value and name of the label for generation of presentable data in tabular or chart form while using SPSS

or any other application software. However, type of data explores need of the application software like SPSS, Minitab etc. Coding should start well in the beginning along with field work separately in a word excel sheet as preferable. Example for the same is given ahead.

Table - 2

Sl. No.	Column Head of Database	Code	Code Details	Analysis – Measurement
1	Migrated	1	Yes	Migration Impact
		2	No	
2	Inter-State/ Intra-State	1	Inter-State	
		2	Intra-State	
3	Origin of Migration (from - to)	1	Rural to Rural	
		2	Rural to Urban	
		3	Urban to Rural	
		4	Urban to Urban	

Zikmund (2010) recommend that quality of data collected for qualitative analysis or interpretation can also be accounted and represented using dummy coding on the basis of dichotomies values '0' and '1'.

Analysis of Primary and Secondary Data: Primary data is collected purely for research to explore additional hidden facts by the researcher. Government and private agencies do also collect primary data at local and national level for formulation of policies for the respective zone selected or at the national level. Secondary data is generally used for formation of background about the study and interpretation with the present and primary data collected if any. Result comparison may not bring desired output as many of the secondary data (collected by various organizations) are not research based. For example data collected by Census and NSSO is not for research purpose, it is collected on periodic intervals for planning purposes as per decision of the government. Primary and Secondary Data: Primary as well as secondary data both has their own importance for the researcher and the data user for development and planning purposes. Primary data analyses are based on your field work and does not require any of the selection criteria (i.e. questionnaire or focused group discussion etc.) except your method of research and research layout. However, secondary data analyses needs careful selection like periodicity (interval) of data collection, agency which collected that data etc. for valuable and analytical outputs.

ANALYTICAL CONTEXT

Understanding of difference between objective, research question and hypothesis will make clarity about the each step of your research. Thomas (1999) has written that on the basis of nature and purpose of your study, research questions should be categorized. Hypothesis build up from set research question derived from objective is given ahead as an example.

Table - 3

Objective	Research Question	Hypothesis
To identify the impact of e-classroom on the age group 18-24 years did schooling in the past 10 years.	How far knowledge level of the population group selected has increased during the decade?	It is visualized that while developing e-skills, inner quality of the students in write up has declined whereas power to grab the things has increased.

Note: Research questions can be more than the selected objectives depending upon nature and area of research.

NEED OF STATISTICS

Statistical techniques are used to carry out statistical analysis to draw inference for the sample drawn from the population. From beginning to last of analysis part it should be remembered that the word parameters is used for population and statistics for the sample in defining their characteristics. Before going further there is need to understand the situations that directs for testing. These are:-

- Initially and entirely on the interest of the researcher,
- In case mean of the sample drawn significantly differ from the hypothetical value of the population mean (μ).
- If mean of two or more samples differ significantly.
- Any other situation that deviates the research objectives.

Predictably, null hypothesis as stated is adopted in results for most of the cases, as

Table - 4

Situation	Decision	
	Accept H_0	Reject H_0
H_0 (True)	Correct Decision	Type I Error
H_0 (False)	Type II Error	Correct Decision

Note: Probability of rejecting H_0 when it is true = Alpha (α)

Probability of accepting H_0 when it is false = Beta (β)

Steps for hypothesis set up and decision:-

- Decision to state null hypothesis. Null hypothesis is denoted as H_0 .
- Decision to state alternate hypothesis. Alternate hypothesis is denoted as H_1 .
- If p-value is < 0.5 , reject the hypothesis.
- If p-value is > 0.5 , accept the hypothesis.

Now the step comes to set hypothesis for appropriate significance level. It depends upon the probability of rejecting the null hypothesis even it the same is true. Its value differs from case to case and is either taken as 1 or 5 per cent. It means that your research analysis are in 99 per cent and 95 per cent confidence level thus indicating that decision taken is right. It should also be noted that hypothesis rejected (as rejection of null hypothesis is significant) at 1 per cent cannot be accepted for 5 per cent significance level.

So far as you know that variables are used to measure and produce the results of the research in accordance with the pre-determined objectives. You have to be decisive about your research work and safeguard that finally contribution is going to be useful for development in the field of education, medical, technology, agriculture, human, socio-economic, amenities, defence, tourism, behavior, marketing, finance, economics, sociology, democracy or whatsoever. Finalization of this moment is a first step towards accurate structure of the research methodology.

ANALYSIS OF QUANTITATIVE DATA

Most known presentable way of quantitative data is; data in tabular form, graphical displays through charts / graphs and summary statistics. Qualitative add up to your research work starts from preparation of charts and graphs whereas data measured on ordinal, interval and ratio level are most suitable from their characteristic point of view. Sharma (2005) also agreed that quantitative classification should be measurable such as height, weight etc. Before preparation of any chart or graph it is important to know about scales as all scales are not feasible for all kind of charts. As scale wise compatibility for nominal and ordinal scale is for bar chart and interval and ratio is for histogram. Apart from these, other statistical ways for quantitative analysis of data are:-

DESCRIPTIVE STATISTICS

- Frequency distribution of the data in selected categories.
- Measuring of Central Tendency (Mean, Median, and Mode) to derive the representative value.
- Measure of Dispersion (Range, Standard deviation) wherever true value of the data isn't revealed using Central Tendency.
- Cross-tabulation to check association between the selected variable for comparison.

INFERENTIAL STATISTICS

Correlation

- This technique is used to reveal the level of nearness and farthest gap between and among the selected variables (may be dependent and independent also).

T-test

- Single sample t-test is used to test sample mean if the same is different from the hypothesized value.
- Paired sample t-test is used to observe means of two different values of different times or period (in case of two dependent and two independent variables also) and also for correlation coefficient.
- T-test is used for small samples.

F-test

- This test is used in alternate to t-test, especially for linear measurement or say for testing equality of two population variance.

Z-test

- This test is used for population mean of single and difference of two. Also for testing of single population proportion and difference of two population proportions.
- Z-test is used for large samples.

One-way Analysis of Variance (ANOVA)

- It is extension of t-test. T-test is used for comparison of two groups and in ANOVA more than two groups are compared.
- One way ANOVA is test difference in the means of the categorical independent variables (split in two or more than two categories).

Besides above there are non-parametric tests, mainly used in general research are such as; Chi-square Test, binomial test, Wilcoxon test, Friedman test, Mann-Whitney test and Spearman Correlation Coefficient test.

ANALYSIS OF QUALITATIVE DATA

We often speak and try to bring quality in research work. In real quality lies within the data collected and interpretation of its results. Quality of research demands originality of text, brand new ideas, strong evidence for comparative analysis and above all total ethics during the research period. Sharma (2005) has explained that qualitative classification should be in accordance to attributes like gender, colour of hair, level of literacy, religion and more.

From qualitative characteristics concern data measured on nominal scale is more relevant to this state of analysis. Genuinely quality counts research's useful thoughts narrated on paper and free from any kind of plagiarism. Zikmund, Babin, Carr and Griffin (2013) had written that it is the researcher that interpret and elaborate inner meanings and new visions for quality add up in the existing research. For analysis of qualitative data techniques mainly used are as ahead:-

Factor Analysis

- This technique is useful in reducing number of variable, by combining (two or more variables) into a single factor. Simple steps of the process are; formulation of problem, determination of methods & factors, interpretation of factors and thereafter calculation of the factor scores. Afifi and Clark (1996) had advocated that this technique is used to examine interrelationship among set of variables.

Multiple Regression

- Researchers generally do not use this test for analysis and compatibility it requires dependent and independent variables which specify a period (with actual and perfect time interval) of the data collected and its ratio. This technique represents control and decontrol over the R² values in respect of variables.

Discriminant Analysis

- This technique is useful for assumption of membership between two or more mutually exclusive groups. E.g. during admission process on the basis of aptitude test scores obtained in each group, stream for admission is recommended to the candidate.

Cluster Analysis

- Cluster sampling is as good as random sampling but samples are taken from clusters (of the population divided into groups).

Multivariate Analysis

Canonical Correlation

- Canonical relation is helpful in finding correlation between the discriminant scores (and the groups). The groups are there as per needs of the researcher to find linear relationship between one set of variables (dependent) and more than one set of variables (independent).

Multidimensional Scaling

- This technique is used to measure analysis simultaneously for more than one direction for set of variables correlated or uncorrelated.

Multivariate ANOVA

- It is used for calculation of variance within and among the group selected for analysis. Appropriately it is best recommended for metric dependent variables and non-metric explanatory variables.

Reinvestigation

Finally technique adopted should be placed for verification process at the last stage. As in case of data analysis using statistical techniques, confirmatory factor analysis (CFA) plays a vital role in finding out accuracy of the model (on the basis of selected variables). This process is useful for identification of outliers, catch on missing data, model fitment and interpretation desired (actual in tune to research hypothesis been or being tested) of results.

Write up tips for Final Report

- All the abbreviations used in the report should be properly addressed for the first time. If the same is being used at many places in the report, list of acronyms may be prepared separately.
- Make use of options available for reference management such as Mendeley, References for various styles (in MS Word) for preparation of references and bibliography to improve quality of your report while saving your precious time of the research period.
- Perfect research report should be limited to 50, 000 to 70, 000 words of the main body. However, limitation of pages including the preliminary pages and annexures should be up to 300.

- List of plates such as maps, field photographs or any other related image should be separately placed after list of charts and plates in actual plates at the last.
- None of your ideas or suggestions should repeat in the entire report.
- Heading of all tables, figures and charts should be at the top with centre alignment. Each should also have source and notes.
- Write up should have short phrases for better quality as for 'during the process of publication' it should be 'in publication process'.
- Citation of author should be like as Kumar (2017) [if within the sentence] and as (Kumar, 2017) [if at the end of the passage].
- All mathematical and metric units used for calculation and as reference should be separately tabulated after list of table or acronyms.
- Likewise research plan, well planning of manuscript (in fact a proper layout) will have rich ideas for inclusion from time to time.
- All ideas generated during research period should be written immediately, irrelevant to study should be omitted and relevant be suitably edited while finalizing the report.

CONCLUSION

Ground work preparation is most important as your research will be providing essential facts on a selected subject and specific location. On the basis analysis diagnosed at your end using statistical techniques provide scientific aspect for test of the population of the field area researched. You are the administrative in planning, manager in operational completion and analyst for the data collected. Thus recommendations developing from your research experience needs to add quality in existing information for development perspective.

Researchers must always have a diary with them during the entire period of research. Schedule must always be available with alternate options, as in case if the targeted output not achieved. Information collected should be bifurcated in two parts. First, directly it should relate to meet the objectives and results of the hypothesis. Secondly, additional information retrieved from literature / web sources or from the field should be saved as notes for additional publications.

References of each article / paper / chapter reviewed must be followed to reach in depth of the analysis and views of the others to boost further your scope of study. Final results depend on the measurement options adopted. In research measuring instrument refers to your selected techniques (mathematical or say statistical) questionnaire, schedules etc. Questionnaire of big organizations like Census of India, The World Bank etc. should also be reviewed to add something new to your research.

Though statistical techniques are usually applied in the last by the researcher while planning for computation of results from the data collected but it is preferable to decide the route of the research well in advance. It should always be remembered that your research in thesis form is not only for the stacking purpose in the libraries, it should have much more than the available studies for comparative analysis by our successors and the planners.

Quantitative and qualitative analysis also need strategy for quality output. In accordance to that as Mouton and Marais (1990) had written that qualitative approaches are relatively more exposed and wider in handling the issues than the quantitative approaches. Quality works available enhances researchers to add further in values, social and psychological factors that researcher experienced during the tour of study.

Make use of Gant Chart to plan your schedule of research. Classify your entire research period and set these with objective wise deadlines. You have to define finally for your research that either it is on sustainability or well established. If it is on sustainability your data must have values that improve the qualitative aspects of the existing scenario, otherwise for well-established facts core of your research objectives / questions should be to identify the gap which represents quantitative measure with qualitative results for further improvements. Even direct interaction with the respondent (or group) while interviewing (also observation and discussion) does not come out with true results unless interest of researcher is high and trust of the respondent is established.

Depending on the subject selected; above all, triangulation and meta-analysis also are the best sources to give better direction in meeting the desired results. While being specific and focused to your sample area, agendas are to be prepared for follow up of the routine progress. This may be weekly or fortnightly and solely depends at discretion of self-management and supervisors' agreement. Strong foundation and strategic management will ease your research work in time bounded period with desired results. Here, finally your research with qualitative output is over.

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