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Unit - 6 (D)
QUALITATIVE DATA ANALYSIS

INTRODUCTION

Meaning: Qualitative data analysis is the array of processes and procedures whereby a researcher provides explanations, understanding and interpretations of the phenomenon under study on the basis of meaningful and symbolic content of qualitative data. It provides ways of discerning, examining, comparing and contrasting and interpreting meaningful patterns and themes. Meaningfulness is determined by the specific goals and objectives of the topic at hand wherein the same set of data can be analysed and synthesised from multiple angles depending on the research topic. It is based on the interpretative philosophy. Qualitative data are subjective, soft, rich and in-depth descriptions usually presented in the form of words. The most common forms of obtaining qualitative data include semi structured and unstructured interviews, observations, life histories and documents. The process of analysing is difficult rigorous.

Broad Focus of Qualitative Research : These include finding answers to the following questions:

- What is the interpretation of the world from the participants' perspective?
- Why do they have a particular perspective?
- How did they develop such a perspective?
- What are their activities?
- How do they identify and classify themselves and others?
- How do they convey their perspective of their situation?
- What patterns and common themes surface in participants' responses dealing with specific items? How do these patterns shed light on the broader study questions?
- Are there any deviations from these patterns? If so, are there any factors that might explain these atypical responses?
- What stories emerge from these responses? How do these stories help in illuminating the broader study questions?
- Do any of these patterns or findings suggest additional data that may be required? Do any of the study questions need to be revised?
- Do the patterns that emerge substantiate the findings of any corresponding qualitative analysis that have been conducted? If not, what might explain these discrepancies?

Specific Research Questions Usually Formulated in Qualitative Research

- What time did school start in the morning?
- What would students probably have to do before going to school ?

- What was the weather like in the month of data collection?
- How did the students get from home to school ?
- What were the morning activities ?
- What did the students do in the recess?
- What were the activities after recess?
- What was the classroom environment like?
- What books and instructional materials were used?
- At what time did the school got over?
- What would students probably have to do after school got over ?
- What kind of homework was given and how much time it required?

Before describing the process of qualitative data analysis process, it is necessary to describe the terms associated with process.

Principles of Qualitative Data Analysis

These are as follows;

1. Proceeding systematically and rigorously (minimise human error).
2. Recording process, memos, journals, etc.
3. Focusing on responding to research questions.
4. Identifying appropriate level of interpretation suitable to a situation.
5. Simultaneous process of inquiry and analysis.
6. Seeking to explain or enlighten.
7. Evolutionary/emerging.

Characteristics of Qualitative Data Analysis:

According to Seidel, the process has the following characteristics :

a. **Iterative and Progressive** : The process is iterative and progressive because it is a cycle that keeps repeating. For example, if you are thinking about things, you also start noticing new things in the data. You then collect and think about these new things. In principle the process is an infinite spiral.

b. **Recursive** : The process is recursive because one part can call you back to a previous part. For example, while you are busy collecting things, you might simultaneously start noticing new things to collect.

c. **Holographic** : The process is holographic in that each step in the process contains the entire process. For example, when you first notice things, you are already mentally collecting and thinking about those things.

COMPONENTS OF QUALITATIVE DATA ANALYSIS

According to Miles and Huberman, following are the major components of qualitative data analysis:

(A) Data Reduction : "Data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written up field notes or transcriptions." First, the mass of data has to be organized and somehow meaningfully reduced or reconfigured. These data are condensed so as to make them more manageable. They are also transformed so that they can be made intelligible in terms of the issues being addressed. Data reduction often forces choices about which aspects of the accumulated data should be emphasised, reduced or set aside completely for the purposes of the topic at hand. Data in themselves do not reveal anything and hence it is not necessary to present a large amount of unassimilated and uncategorized data for the reader's consumption in order to show that you are "perfectly objective". In qualitative analysis, the researcher uses the principle of selectivity to determine which data are to be singled out for description. This usually involves some combination of deductive and inductive analysis. While initial categorizations are shaped by pre-established research questions, the qualitative researcher should remain open to inducing new meanings from the data available. Data reduction should be guided primarily by the need to address the salient question(s) in a research. This necessitates selective winnowing/sifting which refers to removing data from a group so that only the best ones which are relevant for answering particular research questions are left. This is difficult as not only qualitative data are very rich but also because the person who analyses the data also often plays a direct, personal role in collecting them. The process of data reduction starts with a focus on distilling what the different respondents report about the activity, practice or phenomenon under study to share knowledge. The information given by various categories of sample is now compared – such as the information given by experienced and new teachers or the information given by teachers, principal, students and/or parents about central themes of the research. In setting out these similarities and dissimilarities, it is important not to so "flatten" or reduce the data that they sound like close-ended survey responses. The researcher should ensure that the richness of the data is not unfairly and unnecessarily diluted. Apart from exploring the specific content of the respondents' views, it is also a good idea to take note of the relative frequency with which different issues are raised, as well as the intensity with which they are expressed.

(B) Data Display : Data display provides "an organized, compressed assembly of information that permits conclusion drawing..." A display can be an extended piece of text or a diagram, chart or matrix that provides a new way of arranging and thinking about the more textually embedded data. Data displays, permits the researcher to extrapolate from the data enough to begin to identify

systematic patterns and interrelationships. At the display stage, additional, higher order categories or themes may emerge from the data that go beyond those first discovered during the initial process of data reduction. Data display can be extremely helpful in identifying whether a system is working effectively and how to change it. The qualitative researcher needs to discern patterns of among various concepts so as to gain a clear understanding of the topic at hand. Data could be displayed using a series of flow charts that map out any critical paths, decision points, and supporting evidence that emerge from establishing the data for each site. The researcher may (1) use the data from subsequent sites to modify the original flow chart of the first site, (2) prepare an independent flow chart for each site; and/or (3) prepare a single flow chart for some events (if most sites adopted a generic approach) and multiple flow charts for others.

(C) Conclusion Drawing and Verification : Conclusion drawing requires a researcher to begin to decide what things mean. He does this by noting regularities, patterns (differences/similarities), explanations, possible configurations, causal flows, and propositions. This process involves stepping back to consider what the analysed data mean and to assess their implications for the questions at hand. Verification, integrally linked to conclusion drawing, entails revisiting the data as many times as necessary to cross-check or verify these emergent conclusions. Miles and Huberman assert that "The meanings emerging from the data have to be tested for their plausibility, their sturdiness, their confirmability' - that is, their validity". Validity in this context refers to whether the conclusions being drawn from the data are credible, defensible, warranted, and able to withstand alternative explanations. When qualitative data are used with the intension of identifying dimensions/aspects of a concept for designing/developing a quantitative tool, this step may be postponed. Reducing the data and looking for relationships will provide adequate information for developing other instruments.

Miles and Huberman describe several tactics of systematically examining and re-examining the data including noting patterns and themes, clustering cases, making contrasts and comparisons, partitioning variables and subsuming particulars in the general which can be employed simultaneously and iteratively for drawing conclusions in a qualitative research. This process is facilitated if the theoretical or logical assumptions underlying the research are stated clearly. They further identify 13 tactics for testing or confirming findings, all of which address the need to build systematic "safeguards against self-delusion" into the process of analysis.

THE PROCEDURES OF QUALITATIVE DATA ANALYSIS

These are as follows:

1. Coding/indexing
2. Categorisation
3. Abstraction
4. Comparison
5. Dimensionalisation
6. Integration
7. Iteration
8. Refutation (subjecting inferences to scrutiny)
9. Interpretation (grasp of meaning - difficult to describe procedurally)

Steps of Qualitative Data Analysis

The Logico-Inductive process of data analysis is as follows;

- Analysis is logico-inductive.
- Data are mostly verbal.
- Observations are made of behaviours, situations, interactions, objects and environment.
- Becoming familiar with the data.
- Data are examined in depth to provide detailed descriptions of the setting, participants and activity (describing).
- Coding pieces of data.
- Grouping them into potential themes (classifying) which are identified from observations through (reading / memoing).
- Themes are clustered into categories.
- Categories are scrutinised to discover patterns.
- Explanations are made from patterns.
- Interpreting and synthesizing the organised data into general written conclusions or understandings based on what is observed and are stated verbally (interpreting).
- These conclusions are used to answer research questions.

Terms associated with Qualitative Data Analysis:

- **Data** : It is the information obtained in the form of words.
- **Category** : It is a classification of ideas and concepts. When concepts in the data are examined and compared with one another and connections are made, categories are formed. Categories are used to organise similar concepts into distinct groups.

- **Pattern** : It is a link or the relationship between two or more categories that further organises the data and that usually becomes the primary basis of organising and reporting the outcomes of the study. Pattern seeking means examining the data in as many ways as possible through understanding the complex links between situations, processes, beliefs and actions.

Qualitative data analysis is a predominantly an inductive process of organizing data into categories and patterns (relationship) among the categories.

Types of Codes Usually Used in Educational Research

Seidel identifies three major types of codes in qualitative analysis of data:

1. **Descriptive Coding** : This is when coding is used to describe what is in the data.
2. **Objectivist Coding** : According to Seidel and Kelle, an objectivist approach treats code words as condensed representation of the facts described in the data. Given this assumption, code words can be treated as substitutes for the text and the analysis can focus on the codes instead of the text itself. You can then imitate traditional distributional analysis and hypothesis testing for qualitative data. But first you must be able to trust your code words. To trust a code word you need: 1) to guarantee that every time you use a code word to identify a segment of text that segment is an unambiguous instance of what that code word represents, 2) to guarantee that you applied that code word to the text consistently in the traditional sense of the concept of reliability, and 3) to guarantee that you have identified every instance of what the code represents. If the above conditions are met, then: 1) the codes are adequate surrogates for the text they identify, 2) the text is reducible to the codes, and 3) it is appropriate to analyze relationships among codes. If you fall short of meeting these conditions then an analysis of relationships among code words is risky business.
3. **Heuristic Coding** : In a heuristic approach, code words are primarily flags or signposts that point to things in the data. The role of code words is to help you collect the things you have noticed so you can subject them to further analysis. Heuristic codes help you reorganize the data and give you different views of the data. They facilitate the discovery of things, and they help you open up the data to further intensive analysis and inspection. The burdens placed on heuristic codes are much less than those placed on objective codes. In a heuristic approach code words more or less represent the things you have noticed. You have no assurance that the things you have coded are always the same type of thing, nor that you have captured every possible instance of that thing in your coding of the data. This does not absolve you of the responsibility to refine and develop your coding scheme and your analysis of the data. Nor does it excuse you from looking for counter examples and confirming examples in the data. The

heuristic approach does say that coding the data is never enough. It is the beginning of a process that requires you to work deeper and deeper into your data. Further, heuristic code words change and evolve as the analysis develops. The way you use the same code word changes over time. Text coded at time one is not necessarily equivalent with text coded at time two. Finally, heuristic code words change and transform the researcher who, in turn, changes and transforms the code words as the analysis proceeds.

Bogdan and Biklen (1998) provide common types of coding categories, but emphasize that your hypotheses shape your coding scheme.

Setting/Context codes provide background information on the setting, topic, or subjects.

1. Defining the Situation codes categorize the world view of respondents and how they see themselves in relation to a setting or your topic.
2. Respondent Perspective codes capture how respondents define a particular aspect of a setting. These perspectives may be summed up in phrases they use, such as, "Say what you mean, but don't say it mean."
3. Respondents' Ways of Thinking about People and Objects codes capture how they categorize and view each other, outsiders, and objects. For example, a dean at a private school may categorize students: "There are crackerjack kids and there are junk kids."
4. Process codes categorize sequences of events and changes over times.
5. Activity codes identify recurring informal and formal types of behaviour.
6. Event codes, in contrast, are directed at infrequent or unique happenings in the setting or lives of respondents.
7. Strategy codes relate to ways people accomplish things, such as how instructors maintain students' attention during lectures.
8. Relationship and social structure codes tell you about alliances, friendships, and adversaries as well as about more formally defined relations such as social roles.
9. Method codes identify your research approaches, procedures, dilemmas, and breakthroughs.

STRATEGIES OF QUALITATIVE DATA ANALYSIS

Some of these are as follows:

A. **Analytical Induction** : Analytic induction is a way of building explanations in qualitative analysis by constructing and testing a set of causal links between events, actions etc. in one case and the iterative extension of this to further cases. It is research logic used to collect, develop analysis and organise the presentation of research findings. It refers to a systematic and exhaustive

examination of a limited number of cases in order to provide generalisations and identify similarities between various social phenomena in order to develop contacts or ideas. Its formal objective is causal explanation. It has its origin in the theory of symbolic interaction which stipulates that a person's actions are built up and evolve over time through processes of learning, trial-and-error and adjustment to responses by others. This helps in searching for broad categories followed by development of subcategories. If no relevant similarities can be identified, then either the data needs to be re-evaluated and the definition of similarities changed, or the category is too wide and heterogeneous and should be narrowed down. In analytical induction, definitions of terms are not identified/determined at the beginning of research. They are rather, considered hypotheses to be tested using inductive reasoning. It allows for modification of concepts and relationships between concepts aimed at representing reality of the situation most accurately.

According to Katz, "Analytic induction (AI) is a research logic used to collect data, develop analysis, and organize the presentation of research findings. Its formal objective is causal explanation, a specification of the individually necessary and jointly sufficient conditions for the emergence of some part of social life. AI calls for the progressive redefinition of the phenomenon to be explained (the explanandum) and of explanatory factors (the explanans), such that a perfect (sometimes called "universal") relationship is maintained. Initial cases are inspected to locate common factors and provisional explanations. As new cases are examined and initial hypotheses are contradicted, the explanation is reworked in one or both of two ways The definition of the explanandum may be redefined so that troublesome cases either become consistent with the explanans or are placed outside the scope of the inquiry; or the explanations may be revised so that all cases of the target phenomenon display the explanatory conditions. There is no methodological value in piling up confirming cases; the strategy is exclusively qualitative, seeking encounters with new varieties of data in order to force revisions that will make the analysis valid when applied to an increasingly diverse range of cases. The investigation continues until the researcher can no longer practically pursue negative cases."

Usually, three explanatory mechanisms are available for presenting the findings in analytical induction as follows:
(a) Practicalities of action.
(b) Self-awareness and self-regard.
(c) Sensual base of motivation in desires, emotions or a sense of compulsion to act.

The steps of analytical induction process are as follows
(a) Develop a hypothetical statement drawn from an individual instance.
(b) Compare that hypothesis with alternative possibilities taken from other instances. Thus the social system provides categories and classifications, rather than being imposed upon the social system. Progress in the social sciences is escalated further by comparing aspects of a social system with similar aspects in alternative social systems. The emphasis in the process is upon the whole, even though elements are analysed as are relationships between those elements. It is not necessary that the specific cases being studied are average or representative of the phenomena.

According to Cressey, the steps of analytical induction process are as follows :
(a) A phenomenon is defined in a tentative manner.
(b) A hypothesis is developed about it.
(c) A single instance is considered to determine if the hypothesis is confirmed.
(d) If the hypothesis fails to be confirmed, either the phenomenon is redefined or the hypothesis is revised so as to include the instance examined.
(e) Additional cases are examined, and if the new hypothesis is repeatedly confirmed, some degree of certainty about the hypothesis is ensured.
(f) Each negative case requires that the hypothesis be reformulated until there are no exceptions.

B. **Constant Comparison** : Many writers suggest about the ways of approaching your data so that you can do the coding of the data with an open mind and recognize noteworthy patterns in the data. Perhaps the most famous are those made by the grounded theorists. This could be done through constant comparison method. This requires that every time you select a passage of text (or its equivalent in video etc.) and code it, you should compare it with all those passages you have already coded that way, perhaps in other cases. This ensures that your coding is consistent and allows you to consider the possibility either that some of the passages coded that way do not fit as well and could therefore be better codes as something else or that there are dimensions or phenomena in the passages that might well be coded another way as well. But the potential for comparisons does not stop there. You can compare the passage with those codes in similar or related ways or even compare them with cases and examples from outside your data set altogether. Previously coded text also needs to be checked to see if the new codes created are relevant. Constant comparison is a central part of grounded theory. Newly gathered data are continually compared with previously collected data and their coding in order to refine the development of theoretical categories. The purpose is to test emerging ideas

that might take the research in new and fruitful directions. In the case of far out comparisons, the comparison is made with cases and situations that are similar in some respects but quite different in others and may be completely outside the study. For example, still thinking about parental help, we might make a comparison with the way teachers help students. Reflecting on the similarities and differences between teaching and parental relationships might suggest other dimensions to parental help, like the way that teachers get paid for their work but parents do not.

Ryan and Bernard suggest a number of ways in which those coding transcripts can discover new themes in their data. Drawing heavily on Strauss and Corbin (1990) they suggest these include:

a. **Word repetitions** : Look for commonly used words and words whose close repetition may indicated emotions

b. **Indigenous categories (what the grounded theorists refer to as in vivo codes)** : It refers to terms used by respondents with a particular meaning and significance in their setting.

c. **Key-words-in-context** : Look for the range of uses of key terms in the phrases and sentences in which they occur.

d. **Compare and contrast** : It is essentially the grounded theory idea of constant comparison. Ask, what is this about?' and how does it differ from the preceding or following statements?'

e. **Social science queries** : Introduce social science explanations and theories, for example, to explain the conditions, actions, interaction and consequences of phenomena.

f. **Searching for missing information** : It is essential to try to get an idea of what is not being done or talked out, but which you would have expected to find.

g. **Metaphors and analogies** : People often use metaphor to indicate something about their key, central beliefs about things and these may indicate the way they feel about things too.

h. **Transitions** : One of the discursive elements in speech which includes turn-taking in conversation as well as the more poetic and narrative use of story structures.

i. **Connectors** : It refers to connections between terms such as causal (since', because', as' etc) or logical (implies', means', is one of' etc.) 296

j. **Unmarked text** : Examine the text that has not been coded at a theme or even not at all.

k. **Pawing (i.e. handling)** : It refers to marking the text and eyeballing or scanning the text. Circle words, underline, use coloured highlighters, run coloured lines

down the margins to indicate different meanings and coding. Then look for patterns and significances.

l. Cutting and sorting : It refers to the traditional technique of cutting up transcripts and collecting all those coded the same way into piles, envelopes or folders or pasting them onto cards. Laying out all these scraps and re-reading them, together, is an essential part of the process of analysis.

C. Triangulation : According to Berg and Berg, triangulation is a term originally associated with surveying activities, map making, navigation and military practices. In each case, there are three known objects or points used to draw sighting lines towards an unknown point or object. Usually, these three sighting lines will intersect forming a triangle known as the triangle of error. Assuming that the three lines are equal in error, the best estimated place of the new point or object is at the centre of the triangle. The word triangulation was first used in the social sciences as metaphor describing a form of multiple operationalisation or convergent validation. Campbell and Fiske were the first to apply the navigational term triangulation to research. The simile is quite appropriate because a phenomenon under study in a qualitative research is much like a ship at sea as the exact description of the phenomenon in a qualitative research is unclear. They used the term triangulation to describe multiple data collection strategies for measuring a single concept. This is known as data triangulation. According to them, triangulation is a powerful way of demonstrating concurrent validity, particularly in qualitative research. Later on, Denzin introduced another metaphor, viz., line of action' which characterises the use of multiple data collection strategies (usually three), multiple theories, multiple researchers, multiple methodologies or a combination of these four categories of researcher activities. This is aimed at mutual confirmation of measures and validation of findings. The purpose of triangulation is not restricted to combining different kinds of data but to relate them so as enhance the validity of the findings.

Triangulation is an approach to research that uses a combination of more than one research strategy in a single investigation. Triangulation can be a useful tool for qualitative as well as quantitative researchers. The goal in choosing different strategies in the same study is to balance them so each counterbalances the margin of error in the other.

Used with care, it contributes to the completeness and confirmation of findings necessary in qualitative research investigations.

Choosing Triangulation as a Research Strategy

Qualitative investigators may choose triangulation as a research strategy to assure completeness of findings or to confirm findings. The most accurate description of the elephant comes from a combination of all three individuals' descriptions. Researchers might also choose triangulation to confirm findings and conclusions. Any single qualitative research strategy has its limitations. By combining different strategies, researchers confirm findings by overcoming the limitations of a single strategy. Uncovering the same information from more than one vantage point helps researchers describe how the findings occurred under different circumstances and assists them to confirm the validity of the findings.

Types of Triangulation
1. Data Triangulation : Time, Space, Person
2. Method Triangulation : Design, Data Collection
3. Investigator Triangulation
4. Theory Triangulation
5. Multiple Triangulation. which uses a combination of two or more triangulation techniques in one study.

Each of these are described in detail in the following paragraphs

1. Data Triangulation

According to Denzin (1989) there are three types of data triangulation: (a) time, (b) space, and (c) person.

(a) Time Triangulation : Here, the researcher/s collect data about a phenomenon at different points in time. However, studies based on longitudinal designs are not considered examples of data triangulation for time because they are intended to document changes over time. Triangulations of data analysis in cross sectional and longitudinal research is an example of time triangulation.

(b) Space Triangulation : It consists of collecting data at more than one site. At the outset, the researcher must identify how time or space relate to the study and make an argument supporting the use of different time or space collection points in the study. By collecting data at different points in time and in different spaces, the researcher gains a clearer and more complete description of decision making and is able to differentiate characteristics that span time periods and spaces from characteristics specific to certain times and spaces.

(c) Person Triangulation : According to Denzin, person triangulation has three levels, viz., aggregate, interactive and collective. It is also known as combined levels of triangulation. Here researchers collect data from more than one level of person, that is, a set of individuals, groups, or collectives. Researchers might also discover data that are dissimilar among levels. In such a case, researchers

would collect additional data to resolve the incongruence. According to Smith, there are seven levels of 'person triangulation' as follows :

i. The Individual Level.
ii. Group Analysis : The interaction patterns of individuals and groups.
iii. Organisational Units of Analysis : Units which have qualities not possessed by the individuals making them up.
iv. Institutional Analysis : Relationships within and across the legal (For example, Court, School), political (For example, Government), economic (For example, Business) and familial (For example, Marriage) institutions of the society.
v. Ecological Analysis : Concerned with spatial explanation.
vi. Cultural Analysis : Concerned with the norms, values, practices, traditions and ideologies of a culture.
vii. Societal Analysis : Concerned with gross factors such as urbanisation, industrialisation, education, wealth, etc.

2. Methods Triangulation

Methods triangulation can occur at the level of (a) design or (b) data collection.

(a) Design Level Triangulation : Methods triangulation at the design level has also been called between-method triangulation. Design methods triangulation most often uses quantitative methods combined with qualitative methods in the study design. There is simultaneous and sequential implementation of both quantitative and qualitative methods. Theory should emerge from the qualitative findings and should not be forced by researchers into the theory they are using for the quantitative portion of the study. The blending of qualitative and quantitative approaches does not occur during either data generation or analysis. Rather, researchers blend these approaches at the level of interpretation, merging findings from each technique to derive a consistent outcome. The process of merging findings "is an informed thought process, involving judgment, wisdom, creativity, and insight and includes the privilege of creating or modifying theory". If contradictory findings emerge or researchers find negative cases, the investigators most likely will need to study the phenomenon further. Sometimes triangulation design method might use two different qualitative research methods. When researchers combine methods at the design level, they should consider the purpose of the research and make a logical argument for using each method.

(b) Data Collection Triangulation : Methods triangulation at the data collection level has been called within-method triangulation. Using methods

triangulation at the level of data collection, researchers use two different techniques of data collection, but each technique is within the same research tradition. The purpose of combining the data collection methods is to provide a more holistic and better understanding of the phenomenon under study. It is not an easy task to use method triangulation; it is often more time consuming and expensive to complete a study using methods triangulation.

3. Investigator Triangulation

Investigator triangulation occurs when two or more researchers with divergent backgrounds and expertise work together on the same study. To achieve investigator triangulation, multiple investigators each must have prominent roles in the study and their areas of expertise must be complementary. All the investigators discuss their individual findings and reach a conclusion, which includes all findings. Having a second research expert examine a data set is not considered investigator triangulation. Use of methods triangulation usually requires investigator triangulation because few investigators are expert in more than one research method.

4. Theory Triangulation

Theory triangulation incorporates the use of more than one lens or theory in the analysis of the same data set. In qualitative research, more than one theoretical explanation emerges from the data. Researchers investigate the utility and power of these emerging theories by cycling between data generation and data analysis until they reach a conclusion.

5. Multiple Triangulation

It uses a combination of two or more preceding triangulation techniques in one study.

Reducing Bias in Qualitative Data Analysis:

Bias can influence the results. The credibility of the findings can be increased by:
a. Using multiple sources of data. Using data from different sources helps in cross-checking the findings. For example, combine and compare data from individual interviews with data from focus groups and an analysis of written material on the topic. If the data from these different sources point to the same conclusions, the findings are more reliable.
b. Tracking choices. The findings of the study will be more credible if others understand how the conclusions were drawn. Keep notes of all analytical decisions to help others follow the reasoning. Document reasons for the focus, category labels created, revisions to categories made and any

observations noted concerning the data while reading and re-reading the text.

c. Document the process used for data analysis. People often see and read only what supports their interest or point of view. Everyone sees data from his or her perspective. It is important to minimise this selectivity. State how data was analysed clearly so that others can see how decisions were made, how the analysis was completed and how the interpretations were drawn.

d. Involving others. Getting feedback and input from others can help with both analysis and interpretation. Involve others in the entire analysis process, or in any one of the steps. Have several people or another person review the data independently to identify themes and categories. Then compare categories and resolve any discrepancies in meaning.

Drawbacks to be Avoided

a. Do not generalise results. The goal of qualitative work is not to generalise across a population. Rather, a qualitative data collection approach seeks to provide understanding from the respondent's perspective. It tries to answer the question why. Qualitative data provide for clarification, understanding and explanation, not for generalizing.

b. Choose quotes carefully. Use of quotes can not only provide valuable support to data interpretation but is also useful in directly supporting the argument or illustrate success. However, avoid using people's words out of context or editing quotes to exemplify a point. Use quotes keeping in mind the purpose for including quotes. Include enough of the text to allow the reader to decide what the respondent is trying to convey.

c. Respect confidentiality and anonymity when using quotes. Even if the person's identity is not noted, others might be able to identify the person making the remark. Therefore, get people's permission to use their words.

d. Be aware of, state and deal with limitations. Every study has limitations. Presenting the problems or limitations encountered when collecting and analysing the data helps others understand the conclusions more effectively.