Philosophical Bases of Research Methods:An Integrative Narrative Review Part 2

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Abstract

This narrative review examined the philosophical bases of research methods in terms of: (1) axiology; and (2) methodology. This explored the diversities and similarities between paradigms. Three search strategies were observed including: (1) data search for published research; (2) public engine and manual search; and (3) stakeholders input. Subthemes under axiologic assumptions are: (1) fact-value divide/dichotomy; and (2) ethics. Subthemes under methodologic assumptions are: (1) scientific vs naturalism: hard vs soft science; (2) convergence and divergence; (3) linearity is only in the books and not in practice; (4) hard or easy; (5) theory, frameworks and literature review; (6) non-statistical approaches in positivistic approaches; and (7) complementarity. The focus of the lens is guided by philosophical stances. Each paradigm seeks truth, reality and knowledge. Though quantitative claimed objectivity and qualitative claim subjectivity, both unconsciously observe the same processes. The division is a continuum that delights its deficiencies. This is when divergence converges.

Keywords/phrases: quantitative-qualitative divide, philosophical stances, axiology, methodology

1.0 Contextual Grounding and Significance

Those who perpetuate the quantitative-qualitative divide fails to appreciate that distinctions for both are necessary. It is desolate to note that some individuals who fail to understand the nature of the other paradigm and those who are totally confused in the application of both paradigms disappoint by not giving time in probing the literature. Although numerous publications on the differences between quantitative and qualitative approaches are available, only few attempt to amalgamate them in one literature. This undertaking is not an attempt to produce a cookbook, but to yield a narrative integration of the available information that will help avoid the confusion and divide. Particularly, this review targeted to narratively integrate existing literature to delineate quantitative and qualitative approaches. This will help: (1) novice researchers to differentiate both research traditions; and (2) advance beginners to experts from a specific-oriented research paradigm understand the nature of the other approach.

2.0 Review Focus

The aim of this review was to examine the philosophical bases of research methods. Specifically it answered the following: (1) What are the difference between quantitative and qualitative research methods in terms of Axiology and Methodology; and (2) What are the similarities between quantitative and qualitative research methods?

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3.0 Literature Search

This review of the literature used three search methods:

Database search of published research. Electronic academic databases were searched using Ebscohost research database service. The following databases were searched: (1) Academic Search Premier; (2) ERIC; (3) Library, Information Science & Technology Abstracts; (4) Military and Government Collections; and (5) Primary Search.

Public Engine and Manual Search. Google scholar search was also made to circumvent publication bias. Books on research design and methodologies were also utilized.

Stakeholder Input. Electronic mail and mobile phone contact were made with academics, stakeholders and researchers. They identified some supplementary details of evidence appropriate to the research questions.

Search Procedure and Criteria. Manual search was done for books while systematic electronic search was done for databases and public search engines. Boolean operators, phrase search, nesting, mathematical operators and truncation (wildcards) were exploited stratagems. Terms searched were: (1) quantitative; (2) qualitative; (3) quantitative-qualitative debate; (4) quantitative-qualitative divide; (5) ontology; (6) epistemology; (7) axiology; (8) methodology; (9) rhetoric; and (10) philosophy of research. Publications covered the period 1980 to present. Cited sources with date of publication earlier that 1980 were the sources recommended by the experts. Only English language publications were included. The searched publications were then screened to check: (1) relevance to the research questions; and (2) presented empirical, methodologic and philosophical discussions or reviews.

4.0 Data Evaluation and Sampling

Although it engages selected features of systematic review, not all publications culled have extensive high quality evidence. It did not exclude publications on the basis of quality criteria. Samples were picked based on its logical exposition and relevance to the domain of inquiry. A more narrative approach was suitable to the gamut of research queries. There are 68 articles and 78 books cited in this review.

5.0 Data Analysis

I begun the synthesis by keeping the following few things in mind (Mertens, 2010):

Organization. I developed a flexible framework for organization as I find the data. This made it easier for me to approach the synthesis stage. It is flexible because the formulation of my conceptualization added, deleted, and redefined categories as I move along with the review process. I exploited a more thematic organizational approach.

Narrative Synthesis. The narrative approach to literature synthesis is trailed in this review. I organized the studies in a conceptually logical sequence and afforded adequate element about the literature to support germane critical analysis. The amount of details culled from literature was influenced by the nature of the domain of inquiry:

1. This includes a number of journal article and text books selected on the basis of relevancy, presented in a composed representation, that inaugurated the rationale; and

2. The actual review was extensive and organized into meaningful categories. This provided a gestalt of the topic and described the methods used to search the literature. I provided an organization of the subtopics and cited literature showed agreement or disagreement.

6.0 Axiologic Assumption

Oduor (2010) defined axiology as the theory of values. The matrix below digests the difference between quantitative or qualitative research designs in terms how values are utilized or controlled in the study. This is subdivided into two categories: (1) fact-value divide/fact-value dichotomy; and (2) ethics.

Table 1. Fact-Value Divide / Fact-Value Dichotomy	
Quantitative	**Qualitative**
Values are held on check (theory-laden nature)	Values are inevitable and desirable (value-laden nature)
Objectivity is sought	Relativity provides thick and relevant description
Control is imposed to eliminate extraneous variables	Control is unnecessary, variation of the phenomenon provides a more meaningful data
Facts are empirical	Moral and aesthetic judgment as facts
Do not believe in moral truth	No means to separate facts from subjective truth or fiction
No means to defend values	Values are necessary
Truth are instrumentally determined and operationalized	Truth has subjective provenance and is determined non-instrumentally
Instrumental reasons	Non-operational reasons
Empirical fact-discourse	Value-discourse
Respect privacy, informed consent, minimize harm, etc. (Imposed procedures to observe beneficence, respect and justice)	Balanced exemplification of interpretations, foster partakers' awareness and community camaraderie

Fact-Value Divide / Fact-Value Dichotomy. Quantitative research believed in objective scientific knowledge and it is viewed as valid, certain and accurate (Crotty, 1998). Campbell together with Stanley (1963/1966) revised this claim. They argue that it is probability and not certainty. Crotty's claim is totally impossible since nothing is certain in research (Cook & Campbell, 1979; Shadish, Cook & Campbell, 2002). Qualitative research thinks otherwise. Facts and values are interlocked. In determining the facts, values are inevitable and desirable (Polit & Beck, 2008), necessary for thick description (Lincoln & Guba, 1985; Sandelowski, 2004; Warren & Karner, 2005).

The fact-value divide or fact-value dichotomy is further dissected in the concepts of: (1) empirical vs value discourse; (2) control; and (3) instrumentation:

Empirical vs Value Discourse. Qualitative research determines empirical fact while qualitative research establishes moral and aesthetic judgement as fact (Callicott, 2002; Sagoff, 2004).

Control. The concept of control is also covered in the discussion for axiology. Polit & Beck (2008) stated that in quantitative studies values are held in check and objectivity is sought. A practical application of this is the concept of control. Quantitative researchers implement control measures to attain objectivity (Cormack, 1991), qualitative researchers believed the contrary. When one controls the phenomenon, it is no longer natural (Creswell, 2007). Controlling the phenomenon leads to induced effects and this is the not the concern of a naturalist.

"Einstein never controlled a variable in his life."
Jerry Wellington, 2000

It is waggish to note that even great mathematician do experiments without controlling the variables. Evenhandedly, they are never labeled as subjective. This projects that naturalist are never wrong after all. The concept of naturalism is of high utility since in the real world things are not controlled. The more uncontrolled the phenomenon is, the more thick is its description – plurality of reality is revealed and not forced to singularity.

Instrumentation. Quantitative research believed in empirical-fact discourse (Norton, 2007) and not value discourse (Williams, 1985). This has practical application in instrumentation. Empirical truth is measured using instruments that are operationalized. This controls the influence of values in capturing what is real and truthful. This is never the case in qualitative inquiry. The recognition of subjective truth directs divergence of instrumental strategies (Callicott, 2002; Sagoff, 2004). Instrumentation in qualitative research becomes relative to how data comes in thus making the researcher the best instrument (Britten, 1995; Tollefson, Usher, Francis & Owens, 2001). Subjective provenance of truth can never be determined using operationalized measurement (Callicott, 2002). This does not imply that the researcher as the main instrument is subjective.

Converging the Divide: Objectivity in Qualitative and Subjectivity in Quantitative (Paradox). Though qualitative researchers collect subjective data, it does not necessarily follow that data collection is automatically subjective. Objectivity in qualitative research is observed when personal biases are bracketed out from consciousness during data collection (Ray, 1985). This is when the researchers personal values are compartmentalized so as not to influence the data collection. This is when both quantitative and qualitative converge. However, seeing it superficially, divergence occurs in the data analysis portion. Quantitative research analyze using predetermined framework (Duffy, 1985). Qualitative considers the interpretation of the actors (Kleinman, 2004; Annels, 1999; Koch, 1995; Munhall & Oiler, 1986) making it objective. Interpretations are based from the data and how the participants interpret them (Wall, Glenn, Mitchenson & Poole, 2004; Walters, 1995; Paley, 1997). At times, it recognizes that personal interpretation of the researcher is equally important and must be reported (Moules, 2002; Allen & Jensen, 1990; Wilson & Hutchinson, 1991; Sandelowski, 2000; Koch, 1995; Heidegger, 1962). The aim is to provide a balance of what is from the participants and what is from the researcher (Lopez & Willis, 2006). However, one must also realize that this is not totally exclusive in qualitative research (Phillips, 1987, 1990). In the drafting of the operational framework in quantitative research, there is personal bias or interpretation in choosing the theory and conceptualization of the theoretical framework, variables, method and measures. In providing a narrative explanation of the numerical analysis, quantitative researchers qualify using their own personal interpretation (thus subjective) in conjunction with the predetermined operationalization (which was previously constructed subjectively).

Ethics. In quantitative research, ethics is intermarried with the methodology (Mertens, 2010). This emphasized intellectual honesty (Jennings & Callahan, 1983). These are translated by observing the ethical principles announced in the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1978), which highlighted dogmatic methodologies in observing

beneficence, respect and justice. Though this three are important in conducting qualitative research, Denzin and Lincoln (2008) argued that the ethical procedures designed for quantitative research must not be forced in qualitative research since it followed a different panache. It still observes the three basic principles but is carried differently. This had been dissected using concept of fairness and authenticity (ontologic, educative, catalytic and tactical), and further presented explicitly thru reflexivity, rapport and reciprocity.

7.0 Methodologic Assumption

This section is subdivided into 3 sub-categories: (1) process; (2) data collection and analysis; (3) measurement and discovery; and (4) sampling and generalizability.

Table 2. Difference in terms of Process

Quantitative	Qualitative
A priori	Posteriori
Determinism (causal and associative): Product only	Relativistic: Product and process oriented
Hypothesis-testing (hypothetico-deductive)	Phenomenological in nature
Numerical and predictive nature	Narration of multiplicity of reality
Predetermined protocols (prescriptive)	Methods are emergent
Fixed methods and design	Flexible methodology
Reductionist (sedimented view)	Provides thick description of interpretative realities
Deductive – concept or theory to testing	Inductive (can also be abductive or retroductive) – grounded data to theory or concept: bottoms-up
Scientific	Naturalistic
It tests existing or newly created conceptualizations.	It crafts the concepts and proposes the theories or conceptualizations that are exploited to takeoff quantitative tests and predictive models.
Knowledge translated to numeric values.	Knowledge expressed narratively.
Valuable for evaluating and testing theory.	Provide academics awareness to abstract issues differently, thus establishing grounds for theoretical development, refinement and expansion.

Reductionist in nature. Answers specific questions by controlling the characteristics of sample, setting and activities. Answers only what and not why.	Seeks to provide exhaustive and comprehensive information, reconnoiters concerns and its context, and elucidates the what, how, when, where and by and among whom performances and processes maneuver while recounting unequivocal detail the outlines and subtleties of actors, setting, activities and interactions.
Test hypothesis statistically	Pursues to categorize and explicate patterns and themes in proceedings and actors.
It is believed that before reality was controlled and converted into numerical assignments, quality was involved by understanding and interpreting the phenomenon. This provides meaning to the numbers. Additionally, the interpretations and discussions of any statistical results are of no doubt qualitative.	
Can be seen as a continuum (quantitative-qualitative continuum): Thus, the mixed method design and other integrative approaches were born.	
Can also be seen as a cycle. Conceptualizations formulated in qualitative approach are used as a framework for quantitative testing or confirmation. Falsified frameworks as a result of quantitative research are explored qualitatively and alternative or competing conceptualizations are molded.	
Alternatively, seen as a divide. The divergence between both causes the quantitative and qualitative argument. Integration may obscure the data and is a misuse of both paradigms.	

This portion talks about the methodologic assumptions. Positivists utilized concepts in the experimentation from the natural sciences (Mertens, 2010). However, postpositivist recognized rigorous application of scientific inquiry, noting that it is difficult if not impossible (Campbell & Stanley, 1963/1966; Cook & Campbell, 1979; Shadish, Cook & Campbell, 2002). Borman and collegues (2007) also acknowledged this limitation.

Scientific vs Naturalism: Hard vs Soft Science. I claim that both are empirical. The only difference is that quantitative upholds hard science while qualitative fosters soft science. Narrations, by logic, are empirical because it can only be perceived passing thru the senses. The person undergoing the phenomenon has the empirical experience. The interpretation of the experience makes it relative. The only difference is that: (1) in quantitative research, it is the researchers who empirically experience the phenomenon; while (2) in qualitative research, it is the participants who empirically experience the phenomenon. Picking up the highly empirical claim of quantitative researcher, the use of the senses for observation is readily available. However, we must not forget that the cognitive interpretation of what had been sensed does not readily follow the blueprint of the a priori (theoretical framework). It has to pass in the interpretative process of thinking which is highly relative. Metacognitively, both trailed similar processes packaged in different forms. Researchers must not confuse this. It takes a well-defined philosophical background to understand the convergence of both discipline and thus must

not be seen as a divide.

I further argue, that qualitative is scientific as long as it follows a systematic process. Devetak, Glažar & Vogrinc (2009) claimed that both, quantitative and qualitative, are scientific. Multiple triangulation technique (data, time, space, person, investigator, method, analysis and theory), an alternative to validation in qualitative research, is one of its scientific approaches (Polit & Beck, 2008). Other forms include: (1) prolonged engagement with persistent observation; (2) audit trail; (3) member check; (4) bracketing; (5) reflexibility; (6) negative case analysis; (7) peer debriefing; and (8) thick description.

Convergence and Divergence. It is believed that before reality was controlled and converted into numerical assignments, understanding and interpreting the phenomenon involved quality. This provides meaning to the numbers. Additionally, the interpretations and discussions of any statistical results are of no doubt qualitative. Furthermore, this can be seen as:

Quantitative-Qualitative Continuum. This can be seen as a continuum. This gave birth to the mix method and design (Pearce, 2002), and other integrative approaches.

Quantitative-Qualitative Cycle. Conceptual izations formulated in qualitative approach are used as a framework for quantitative testing or confirmation. Falsified frameworks as a result of quantitative research are explored qualitatively and alternative or competing conceptualizations are molded.

Quantitative-Qualitative Divide. The dive rgence between both causes the quantitative and qualitative argument. Integration may obscure the data and is a misuse of both paradigms. According to Leininger and McFarland (2005), both paradigms have different philosophies, purposes, goals, methods, and desired outcomes. They must not be observed as identical and expended in the similar manner. Mixing both infringes the philosophy, purposes, and integrity of each paradigm. Misusing mix methodology may spearhead dubious results since it may obscure the data collected (unparalleled results).

8.0 Linearity is Only in Books and Not in Practice

In quantitative inquiry, books suggest linear process but in actuality it is done in a nonlinear fashion (Mertens, 2010). This is similar to that in qualitative research. The only difference is that in qualitative research this is recognized as a methodologic assumption.

The matrix below digests the difference between quantitative or qualitative research designs in terms of data collection and analysis. This will not be comprehensively discussed since some of the entries are already explained previously.

Quantitative and qualitative both seek to identify, explain and discuss patterns within and across data. Quantitative is prescriptive, fixed, nonflexible and rigid (Cook, 1991). You just need to follow the protocol and nothing goes wrong (Tewksbury, 2009). Data collection and analysis followed a prespecified operation (Cohen, Manion & Morrison, 2000). Reality is converted to numerical form and manipulated statistically to be meaningful (Gorard, Prandy & Roberts, 2002). Considering all these enumerations, quantitative researches are easily verified and highly replicable (Gigerenzer, 1993). This is not the case in qualitative research. Its design and methods are both flexible and emergent (Reichardt & Cook, 1979). Considering this, it is difficult to replicate existing methodology in the attempt to arrive in similar results (Ayer, 1946). The uniqueness of results and methods makes it hard to replicate in toto (Ayer, 1936; Schlick, 1959). The ontological idea of multiplicity

Table 3. Difference in terms of Data Collection and Analysis	
Quantitative	**Qualitative**
Seek to identify, explain and discuss patterns within and across data.	
Non-flexible and rigid. Easy and nothing goes wrong when protocols are followed deliberately	It is often viewed as easy, but is in fact more time consuming; require greater emphasis on clarifying and defining meanings.
Downloading a data set without significant interpersonal and creative skills.	Require cerebral, interpersonal and creative abilities to organize, manage, analyze and interpret data.
Fixed and prespecified	Flexible and emergent
Analysis is based from prespecified operations.	The actual task and actions involve certain amount of ingenuity and innovation.
Independent from the one being studied	Interaction required and separatedness must be explicit
Independent from the one being studied	Positioning
It tests the concepts and analyzes data based from prespecified operationalization.	It crafts the concepts and proposes conceptualizations or theories that are exploited to takeoff quantitative tests and predictive models.
Requires counting of the object of investigation or the numeric labels to be created for meaningful variables	As much as possible does not count but describes quantity narratively
Without numbers it cannot be manipulated and patterns cannot be identified	Does not manipulate. Preserves the natural occurrence of the phenomenon being observed
Results can be verified by replicating its procedures	Results and methods are unique to each investigators and readers – thus hard to replicate in toto

of reality contravenes the methodological point of replication. We must remember that the philosophy talks about relativeness of interpretation – between: (1) participants; (2) researchers; (3) readers; and (4) participants, researchers and readers.

9.0 Hard or Easy?

"… quantitative methods are the line dancing approach to science. Everyone and anyone can do it, and all that seems to matter is that you get the steps right… in the right order, you will get the product … so as long as the steps are done mechanically correct[ly], it is presumed to be well executed. Qualitative research on the other hand is the ballet-like, interpretative dance approach to science. While there are steps to be done, it is more important to produce a smooth, well-connected, emotionally infused product… does not rely on the mechanical precision… but instead focuses on how the overall product communicates a message and moves people both emotionally and intellectually." (Richard Tewksbury, 2009)

In qualitative research, though often viewed by nonqualitative as easy, it is in fact cerebrally and emotionally challenging (Tewksbury, 2009; Ramos, 1989). It is time consuming from data collection, management and analysis. It is highly flexible and emergent (Burnard, 2008). The design and methodology, and even the domain of inquiry, may change as data comes in (Ratnesar, 2005). This calls for ingenuity from conceptualization to reporting (Creswell, 2007).

10. Theory, Framework and Literature Review

Quantitative research verifies a theoretical framework: a priori (Polit & Beck, 2008; Bird, 2004). Qualitative research creates a theory: a posteriori (Bird, 2004). This means that theoretical framework is required in a quantitative research. It is not needed in a qualitative research. The theory is a product of research in qualitative whether it is a(n) (Suter, 2012): (1) adaptation of an existing theory; (2) modification of an existing theory; or (3) creation of a new theory. Since theoretical framework is required in a quantitative research, comprehensive literature must be done (Glaser, 1978; Polit & Beck, 2008; Creswell, 2007). However, in qualitative research it is different. As much as possible, literature reviews are suspended (Glaser, 1978; Polit & Beck, 2008) until data comes in. This is to avoid data contamination brought about by the influence in both data collection and analysis (Glaser & Straus, 1967; Cutcliffe, 2000; McGhee, Marland & Atkinson, 2007; Glaser, 1998). When one knows something ahead, it might influence how one ask the question during the interview and what to look for (Charmaz, 2006; Holton, 2007; Nathaniel; 2006; Heath, 2006). One might also utilize what was previously read in the analysis of data (Stern, 2007; Dey, 2007, 1999; Glaser, 1992; McCallin, 2003). Though no one commence with a tabula rasa in research (Glaser & Straus, 1967; Dey, 2007, 1999) it is possible to bracket it out from consciousness (Creswell, 2007; Mertens, 2010). However, Creswell (2007) suggested that literature review prior to data collection might be necessary in: (1) grounding the philosophical stance; (2) drafting the methodology; and (3) entertaining a superficial idea on what to scrutinize. He further recommended that it must not be done extensively.

"So, not only is the tree more important than the seed from which it grows, but so too should the seed be blamed when the tree fails to thrive and provide fruit, shade and other benefits."

(Richard Tewksbury, 2009)

Quantitative researchers blame qualitative researchers on poor theory produced in qualitative research after it is refuted in a quantitative research. One must realize that the objective of doing a quantitative research is to prove that the theory is wrong: the existence of zero relationship. We must not blame the method in qualitative research because of poorly produced theory. That is the

essence of what has been quoted above. It is the poor theory that is problematic and not qualitative methodology.

The matrix below digests the difference between quantitative or qualitative research designs in terms how data are measured or discovered. Entries in this matrix will not be explained since it is already discussed previously.

Table 4. Difference in terms of Measurement or Discovery	
Quantitative	**Qualitative**
Measurement is operationalized	Discovers without operationalization
Measure specific	Open discovery with multiple descriptions
Objective measurement	Relative discovery but confirmable (confirmability with participant or thru triangulation)
Statistical	Narrative
Application is wide but limited by the measured variables.	Application is contextual but is deep and comprehensive.
Products are exact measurements and values indicating descriptions, causalities or strengths of relationships.	Products are present ation of taxonomies, metaphors, creativity, explanations and development of theoretical constructs and arguments.
Can prove existence of description, causality and associations.	Cannot prove existence but proposes or argues in support of particulate manners of description and relations.
Testing descriptions, strength and persistence of associations between narrowly distinct and controlled measures based from existing parameters.	Relies on analytic descriptions thru documentation of redundant or saturated patterns and endeavoring to build an interconnected depiction of the data while emphasizing the suspension or isolation of preconceived parameters.
Works on the assumption that the investigator knows best what a concept means and can pinpoint ways to measure such concepts.	Works on the assumption that concepts are contextually dependent and interpretation is the product of the interaction between the actors, investigator and data.
Both compliments and benefits the production of knowledge.	

There are concerns under measurement and discovery, which were not discussed previously. These are:

Non-Statistical Approaches in Positivistic Approaches. According to Ratnesar (2005), Einstein did not use statistics to develop his theories. He further added that mathematical investigation; statistics and probability do not perform statistics to provide proof.

Complementarity. Though both have different presentations in terms of measurement. These can be seen as complementarity and not a divide. I will be presenting a story to confirm the claim:

The Four-Apple Story. When a quantitative researcher is asked to describe four apples, the investigator will say: "There are four apples". The numeric description of the apple is dependent on certain operationalized measure. It did not describe the entirety of the objects. To comprehensively describe the apple, the researcher needs to predetermine and operationalize certain measures like color, taste, texture, crunch and smell as part of the a priori (theoretical or conceptual framework). It can be comprehensive but can never be complete. A more holistic description can be given among qualitative researchers: "There are red and green aromatic apples; some are smooth in texture and when eaten tastes good and crunchy." What is lacking in the description are the frequency counts. It is still incomplete. Numeric descriptions also give meaning to the phenomenon. When both methods are used, it may arrive in a more comprehensive description: "There are four apples. Two are green and the rest are red. The red ones are aromatic and smooth in texture, tastes good and crunchy. The green ones are not." However, in as much as we tend to combine the strength of both methods to counteract its weaknesses. Description of a certain phenomenon can never be complete and the ultimate truth can never be determined.

The matrix below digests the difference between quantitative or qualitative research designs in terms selection of data to be analyzed and applicability of results to other population and setting.

Table 5. Difference in Sampling and Generalizability

Quantitative	Qualitative
Sampling is based on representativeness	Sampling is based on context
Sampling is computable	Redundancy is enough
Tight sampling procedure	No agreed rule
Results must be externally valid	Results are transferable and not necessarily valid externally
Documenting the single reality that is generalizable to the entire population.	It is about attainment of understandings on the shared feature, with multiple variations, of a phenomenon and how the actors, structures and processes function in a culturally-grounded milieu.

Marshall (1996) claimed that picking a sample is imperative in any investigation. Quantitative researchers take a representative sample to derive a generalizable result that can be claimed by the entire population. The sample size is resolute to the optimal count essential to permit valid deductions. Larger size has a minor risk of sampling error. This is being determined using tight sampling computation. In qualitative research, values, beliefs and attitudes that constitute the staple of qualitative research are essentially not normative in distribution. This marks normal distribution

approach in qualitative inquiry inappropriate. It is significant to appreciate that the quintessence of qualitative research is it's naturalistic nature. By scrutinizing tangible people in natural settings, we do not want to utilize highly controlled approaches to arrive in synthetic sequestration. Therefore sampling must be based on context. Good sampling in qualitative research requires purposeful culling of good informants (Morse, 1991; Coyne, 1997). There is no hard and agreed rule on the number of culled sample in qualitative research (Tuckett, 2004; Rubinstein, 1994; Baum, 2000; Patton, 1990). It is usually in small counts (Miles & Huberman 1994; Patton 1990). This is because the prime concern is to arrive in data saturation (Patton, 2002; Ezzy, 2002; Morse, 1995) to claim transferability and not generalizability (Morse, 1999). It is also troublesome to get big sample since it will consume more time in data analysis. Big sample will lead to exhaustion and confusion. The general rule is to gather saturated data until no new redundant information can be taken (Lincoln & Guba, 1985).

11.0 Conclusion

Both paradigms seek to define truth, reality and knowledge. In its quest for discovery, it is both objective and subjective – unintentionally intertwined in the process. Each way is inherently subjective and both attempts to be idyllically objective. What knowledge is, and its ways of discovering it, are highly relative. This is founded from their personal philosophical stances.

Both paradigms have their identifiable modes of accomplishing their objectives. By grounding oneself in philosophical stances, the researcher is guided on how reality, truth and knowledge are seen. No single choice is perfect. It is only an attempt to capture its partiality. The divide is a continuum that treats its imperfection. Not as an attempt to arrive in its ultimate form but, at least, to articulate as much coverage. The divergence as claimed by some may converge as viewed by others. The distinction between claims is equivalently logical.

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