An overview of research methodology education essay

As research methodology is the plan and structure of investigation of an aim or problem on which research is relaying so different techniques are applied to get the answers of desired question. Methodology is the theory of how research should be undertaken, including the theoretical and philosophical assumptions upon which research is based and the implications of these for the method or methods adopted (Saunders. M, et al, 2007). According to the Kaplan's discussion of this concept in ' The Conduct of Inquiry', He distinguishes several senses of methodology: (1) techniques, the specific procedures used in a given science; (2) honorifics, a ritual invocation attesting to concern with meeting standards of scientific acceptability; (3) epistemology, involving the most basic philosophical questions about the pursuit of truth.

Research methodology is " the overall process guiding the entire research project". Another way to look at methodology is to call it the " primary evidence generation mechanism" (Prashant. P, et al, 2003). It is also an activity which is time consuming so I am using dissimilar proficiencies. My main purpose of the research is to focus on the information technology and its effects at the time of its introduction on the workplaces. I am also analysing the difference among the condition of the workplace before and after the introduction of IT. I am also researching on the technologies (such as computers, digital cameras, automated chines etc) which are used in the workplace.

- THE RESEARCH PROCESS:

The research process that will be utilized in this research is the ‘ research onion’ in order to ensure that it will get all the needed data necessary to accomplish my objectives. This is because conducting a research is like peeling the back layers of an onion-in order to come to the central issue of how to collect the necessary data needed to answer the research questions and objectives, important layers should be first peeled away. With the said process, I will able to create an outline on what measures are most appropriate to be applied in the study. The diagram below is an adaptation from Saunders. M, et al (2007) of the research process onion which is comprehensively introduces the theories of every step of methodology. There are five stages in the ‘ research onion’: Philosophies, approaches, strategies, choices, time horizon and techniques and procedure. And my research process will conduct according to these stages. The first layer raises the question of the research philosophy to adopt, the second considers the subject of research approach that flows from the research philosophy, the third examines the research strategy most applicable, the fourth layer refers to the time horizon a researcher applies to his research, and the fifth layer is the data collection methods to be used.

Research philosophies

All research is based on assumptions about how the world is perceived and how we can best come to understand it and these assumptions are established on research philosophies. These assumptions will underpin the research strategy and the methods choose as a part of that strategy. According to Saunders. M, et al(2007), research philosophy is “ overarching term relating to the development of knowledge and the nature of that

knowledge in relation to research". Johnson and Clark (2006) argues that the vital issue is not so much whether the research should be philosophically informed, but it is how well we are able to reflect upon our philosophical choices.

My research will reflect two research philosophies which are Ontology and Epistemology. These assumptions consist of a stance toward the nature of reality (ontology) and how the researcher knows what she or he knows (Epistemology) (Creswell, W. J, 2007).

Ontology:

This is the philosophy which is related to the nature of reality and its characteristics. This philosophy raises the assumptions researchers have about the way the world operates and the commitment held to particular views. Ontology has two aspects, Objectivism and Subjectivism, which will both have their devotees among business and management researcher (Saunders. M, et al, 2007).

OBJECTIVISM:

An ontological position that asserts that social entities exist in a reality external to, and independent of, social actors concerned with their existence (Saunders. M, et al, 2007).

SUBJECTIVISIM:

An ontological position that asserts that entities are created from the perceptions and consequent actions of those social actors responsible for their creation. An extreme form, it may hold that the nature and existence of every object depends solely on someone's subjective awareness of it.

“ Subjectivism is a philosophical tenet that accords primacy to subjective experience as fundamental of all measure and law. In an extreme form, it may hold that the nature and existence of every object depends solely on someone’s subjective awareness of it” (wekipidia. org).

Epistemology:

Epistemology is concerned with the study of knowledge and what we accept as being valid knowledge. The relationship between the researcher and that which is being researched is involved in this philosophy (Collis, J. and Hussey, R., 2003). The longer researchers stay in the “ field” or get to know the participants, the more they “ know what they know” from firsthand information (Creswell, 2007).

Epistemology is further categorised in to three sub categories, Positivism, Realism and Interpretivism. (Saunders, et. al, 2009, p, 112)

POSITIVISM:

As my research reflects the philosophy of positivism in which I will adopt the philosophical stance of the natural scientist. Positivism is epistemological position that advocates working with an observation social reality. The emphasis is on highly structured methodology to facilate replication, and the end product can be law like generalisations similar to those produced by the physical and natural scientist (Saunders. M. Et al, 2007).

REALISM

Realism is another philosophical position which relates to scientific enquiry. It is the epistemological position that objects exist independently of our knowledge of their existence. The philosophy of realism is that there is a

reality quite independent of the human mind. Realism is somewhat similar to positivism in that it assumes a scientific approach development of knowledge (Saunders. M. Et al, 2007).

There are two forms of realism: direct realism and critical realism. Direct realism is the epistemological position that what we see is what we get: what we experience through our senses portrays the world accurately (Saunders. M. Et al, 2007). Another form is Critical realism which is also the epistemological position that what we experience are sensations, the images of the real world not the things directly (Saunders. M. Et al, 2007).

INTERPRETIVISM:

It advocates the necessity to understand difference between humans in their role as social actors. The emphasis of this philosophical research is on the people rather than objects such as trucks and computers(Saunders. M. Et al, 2007). The heritage of this strand of interpretivisim comes from two intellectual traditions: phenomenology and symbolic interactionism. Phenomenology refers to the way in which human make sense of the world around. Whereas, in symbolic interactionism we are in a continual process of interpreting the social world around us (Saunders. M. Et al, 2007).

Research Approach

Research Approach refers to the approach or the methodology that has been adopted to conduct the research. It basically involves the selection of research questions, the conceptual framework that has to be adopted, the selection of appropriate research method such as primary research, secondary research etc (blurtit. com). Research can be distinguished as

belonging to one of two models a deductive (or “ top down”) approach or an inductive (or “ bottom up”) approach. Deductive approach is one in which a theory and hypothesis (or hypotheses) are formulated, and then a research strategy is planned to test these hypothesis. Whereas, in Inductive approach, data is gathered and the theory is developed as a outcome of the data analysis. (Saunders, Lewis and Thornhill, 2007)

My research will be carried out through the inductive approach in which I will collect data from different resources and develops theory as a result of data analysis. An inductive approach is radically different from the deductive type. I have chosen the inductive approach because it does not have the same strength of relationship between reasons and conclusion. To induce something is to draw a conclusion from one or more particular facts or pieces of evidence. The conclusion explains the facts support the conclusion (Blumberg. B, et al, 2008).

Research strategy:

My research is explanatory in which I am examining the relationship between variables which are information technology, workplace and the people. In order to get a clearer view of the relationship I will collect the qualitative data to explain the reason that how the information technology has impacted the workplace. My research strategy for this work is grounded theory.

- **Research strategy:**

Grounded theory is often thought of as a best example of the inductive approach developing and building method. Grounded theory is, according to

Goulding (2002), particularly helpful for research to predict and explain behaviour, the emphasis being upon developing and building theory.

“ A grounded theory is the research strategy in which theory is developed from data generated by a series of observations or interviews principally involving an inductive approach”, definition by Saunders. M, et al (2007). According to Steren (1994, pg 273), grounded theory is one of the interpretative methods that share the common philosophy of phenomenology – that is, methods that are used to describe the world of the person or persons under study.

A key idea is that this theory development does not come “ off the shelf”, but rather is generated or “ grounded” in data from participants who have experienced the process (Strauss and Corbin, 1998).

The roots of grounded theory can be traced back to a movement known as symbolic interactionism whose origins lie in the work of Charies Cooley (1864 1929) and George Herbert Mead (1863 1931). The concern of these scholars was to avoid the polarities of psychologism and sociologism (Goulding, C., 2000). Grounded theory was originally developed in the 1960’s by two American sociology scholars focusing largely on the health/nursing field, Barney G. Glaser and Anselm L. Strauss, and started to become well known with the publishing of their book, Discovery of Grounded Theory (1967) (Mello, J and Flint, D. J., 2009).

In grounded theory, data collection starts without the formation of an initial theoretical framework. Theory is developed from data generated by a series of observations. These data lead to the generation of predictions which are

then tested in further observations that may confirm, or otherwise, the predictions (Saunders. M. et al, 2007). Methodology uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon. The findings of the research constitute a theoretical formation of the reality under investigation, rather than consisting of a set of numbers, or a group of loosely related themes (Strauss and Corbin, 1990, ed. 1).

OBJECTIVES OF GROUNDED THEORY

Essentially, the objective in grounded theory is to build mid range theory. The emphasis on building effective and complex theory, grounded in data, at various levels of generality, characterizes its most important purpose (Mello, J and Flint, D. J., 2009). Grounded theory is predicated on the idea that " social science theory can be built from data systematically obtained in a social setting" (Robrecht 1995, p. 170). Theory emerges from very deep and contemplative analysis of data obtained in the field rather than from a prioi assumptions developed before the research begins (Mello, J and Flint, D. J., 2009).

Grounded theory researchers aim to develop theories that enable explanation of behavior, are applicable in practice, and provide hypotheses that can be verified. Two features of grounded theory that help set it apart from other qualitative methods are (1) it is not limited to description of the phenomenon, but seeks to develop theoretical concepts, and (2) it is not bound to a particular unit of analysis, time, or place. This allows researchers to develop a grounded theory and apply and test it in areas outside the original study (Mello, J and Flint, D. J., 2009).

The grounded theory perspective of what constitutes a “ theory” is defined by Strauss and Corbin (1998, p. 15) as a “ set of well developed concepts related through statements of relationship, which together constitute an integrated framework that can be used to explain or predict phenomena.” Theory is constructed from conceptual categories and their properties.

Research Choice (Method):

The way in which a researcher chooses to combine the qualitative and quantitative techniques and procedures is said to be research choice. Research choice can also be said as research design. Research choice is categorise in two types: Mono and multiple method. Mono type method is that in which we use single data collection technique and corresponding analysis procedures. Whereas, multiple method is that in which more than one type of data collection technique and analysis procedures are used. In business research, mostly multiple methods is used for the combination of quantitative and qualitative techniques and procedures as well as for primary and secondary data. (Saunders, et. al, 2009, p, 151)

Multiple methods are further categorized into Multi methods and Mixed methods. Multi method is a term refers to those mixtures where associated analysis techniques use more than one data collection technique, but this method is limited within either a qualitative or quantitative world view (Tashakkori and Teddlie, 2003).

My business research will reflect multi method qualitative research studies in which I will collect my data while using qualitative technique which is

interviews. As my data is qualitative so I will analysis it by using qualitative procedure.

Time horizon

There are generally two time horizons for the research strategy. The one is cross sectional, in which the study of particular phenomenon (or phenomena) is conducted at particular time period. And the other is longitudinal studies which is, as stated by Saunders, et al(2009), a series of snapshots and also said to be a ‘ diary’ that involves repeated observations of the same items over long periods of time – often many decades. For my research project, the limited time period is provided and according to specific time period, I will consider cross sectional studies in which I will take a snapshot of Information technology in the work place.

Data Collection Procedures

I will use different categories of procedures for my research. To achieve the research aim, a mixed method qualitative approach will be adopted.

- Primary Data

The primary research is that when source is an original document containing firsthand information about a topic. For e. g. Diaries, Interviews, Letters, Original works of art, Photographs, Works of literature. I will be collecting my primary data by interviewing with different people working in different places. According to Zikmud (2003) *),” Interview is the method of collecting information through face to face contact with the individuals.*

Interviewing:

I will collect my primary data by interviewing personnel's from different people working in different workplaces such as banks, hospitals, offices, educational sectors retail business, industries, etc. An interview is a powerful discussion between two or more people (Kahn and cannel, 1957). The use of interviews can help to gather valid and reliable data that are relevant to research questions and objectives (Saunders. M, et al, 2007). Interviews are associated with the positivist and phenomenological methods. They are the methods of collecting data in which selected participants are asked questions in order to find out what they do, think or feel(Collis, J. and Hussey, R., 2003). Interviews make it easy to compare answers and may be face to face, voice to voice or screen to screen; conducted with individuals or a group of individuals (Collis, J. and Hussey, R., 2003). Interviews may be highly formalized and structured or they may be informal and unstructured. In between there are intermediate positions. One typology that is commonly used is thus related to the level of formality and structure, whereby interviews may be categorized as one of: structured interviews, semi structured interviews, unstructured or in depth interviews (Saunders. M, et al, 2007).

I will conduct semi structured interview in which I will have a list of all the questions to be covered during interview. Semi structured interviews are non standardised and are often referred to as ' qualitative research interviews'. Although the response may be vary from interview to interview. I may also omit or add some questions according to the flow of conversation. The major advantage of this strategy is that with the more natural discussion the

greater detail and variety can be provided by respondents. I will consider the individuals from any firms, organisations (Governmental and Non for profit), Banks and other places which are located in Middlesbrough. I will conduct face to face interviews from individuals and take the notes of the responses which are given by respondent. In these interviews I will ask them that what latest technologies they are using in their workplace and what are the benefits or drawbacks of technological advancement. How these technologies are making the workplace better from the previous time.

- Secondary Data:

Secondary research is that when someone else has collected the data and the researcher interprets and analyses primary sources. Secondary data included both raw and published summaries (Saunders. M, et al, 2007). Secondary data include both qualitative and quantitative data and they are used principally in both descriptive and explanatory research. When secondary data is used, it is easy to build the research on the past collected information of business knowledge which is gathered by other's experiences. The advantage of using secondary data is that it can be obtained rapidly and is less expensive as compared to collect primary data (Zikmund, 2003). In contrast, some disadvantage of secondary data is that they were not designed specifically to meet the researcher's need and user has no control over their accuracy, they may also be inaccurate.

Different researchers have generated a variety of classifications for the secondary data. These classifications do not; however capture the full variety of data. The three main sub groups are created for secondary data, which

are documentary data, survey based data and those compiled from multiples sources (Saunders. M, et al. 2007). The secondary data which I am collecting in my research is compiled from multiple sources. The most important characteristic of secondary sources is that they offer an interpretation of information gathered from primary sources. For e. g. Dissertations, Indexes, Abstracts, Bibliographies, Journal Articles, books, Newspaper, Internet.

Research ethics:

Ethics are moral principles, norms or standards of behaviour that guide moral choices about behaviours and relationships with others. In business research, ethical issues come to the fore whenever a conflict arises between the desire to conduct research that meets the highest quality standards or the request of the sponsor on the one hand, and societal values like, say, privacy, freedom and honesty on the other (Blumberg, B. et al, 2008).

Ethics is the study of the ‘ right behaviour’ and address the questions of how to conduct research in a moral and responsible way (Blumberg, B., 2008). Ethics is also said to be, “ the appropriateness of the researcher’s behavior in relation to the rights of those who become the subject of a research project, or who are affected by it” (Saunders. M, et al, 2007). In most research situations, three parties are involved: the researcher, the sponsoring client (user), and the respondent (subject)(Zikmund. 2003).

Within business and management research, there are two dominant philosophical standpoints: deontology and teleology (Saunders. M, et al, 2007). The deontological view argues that the ends served by the research can never justify the use of research which is unethical. In contrast, the

teleological view argues that the ends served by your research justify the means. Consequently, the benefits of your research findings would be weighed against the costs of acting unethically. This approach has an added complication as you also need to consider whether the benefits of the research are morally just (Saunders. M, et al, 2007).

When ethics are discussed in research design, the first priority is to protect the right of the participant, respondent or subject. Whether data are gathered in an experiment, interview, observation or survey, the respondent has many rights to be safeguarded (Blumberg, B. et al, 2008). In general, the research must be designed so a respondent does not suffer physical harm, discomfort, pain, embarrassment or loss of privacy (Blumberg, B. et al, 2008). To safeguard these things, I will follow three guidelines, first I will explain the benefits of the study then I will explain the participant’s rights and protection and in the last I will obtain secure informed consent.