Title: *Compare and contrast qualitative and quantitative approaches to research methodology.*

It is within human nature and instinct to be aware and to seek an understanding of the natural occurrences within our environment. Therefore it can be said, in order to attain the understanding of the unknown, we must go through specific processes of experiences, reasoning and research *(Mouly, 1978 cited in Cohen, L and Manion J, 2000)*. This brings to light the importance of research within our daily existence, where research is not just looked upon as a practical exercise, more however as an abstract tool with a view to perceive and understand the world in which we live in and how we interpret the knowledge but most importantly how we analyse the purpose of understanding. As '*To understand is hard. Once one understands, action is easy. ' (San Yat Sen, cited in Cohen, L and Manion J, 2000)*

The purpose of research can be seen upon as to explore the information within our environment and consider their viability and effectiveness and whether these can add value for learners to the whole experience. Research Methodologies engage in methods of investigation and sampling techniques, researchers mainly use two types of research to obtain their information, firstly Primary data; this is where information is collected independently, Primary sources refer to specific materials which are written or composed by people who actually witnessed the events that they have describe, this can be phrased as representing knowledge by *'acquaintance' (Bertrand Russell's 1912 cited in May, 1997)*. Primary data is first hand information and there a many different approaches; these include participant observation, experiments, content analysis, and questionnaires. However secondary data is illustrated as data that already exists, secondary research uses existing sources of information, which may be internal or external to the organisation. Examples of these are; other peoples research, the media; the Internet, television documentaries, statistics and books and so fore. Although in some circumstances secondary research is supplemented by undertaking primary research methods.

There are numerous accounts of research methods; however within this assignment, looking into depth of the specific two in particular as identified two different methods for designing and doing research projects, of qualitative and quantitative methods (*Blaxter et all, 1997).* As all research whether be it quantitative and qualitative, is based upon some underlying assumptions about what makes a *'valid'* research and what types of research methods are appropriate, so in order to evaluate, compare and contrast these research methods, it is vital to explore each ones individual concepts and fundamental characteristics of each method before evaluating them collectively.

Firstly beginning with the quantitative research method, because it holds this scientific aura, due to that quantitative research methods were originally developed in the natural sciences to study natural phenomena, *(Bryman, 1988)* this can be visualized as it uses numerical forms of representation which then can be presented in forms of graphs and tables, where it transmits a sense of a solid and objective source of research. *(Denscombe ,2003)* Quantitative research is associated with many different approaches to data collection; the main fundamental characteristics are as follows; the approach is concerned with obtaining numerical information which can be analysed using statistics, where it does not need to go beyond the use of what is stated as '*descriptive' (Silverman, 2000)*. The Aims are to establish cause and affect relationships, where experiments result in high levels of reliability**.** One advantage of the quantitative approach is that it measures, for example, the reactions of a large number of people to a limited set of questions, thus facilitating comparison and statistical collection of the data. This gives a broader set of findings. Quantitative research on the other hand cannot literally be seen as being subject to quantification, *(Bryman, 1989*), rather the suggestion from *(Bell, 1993)* that there is more to this method. *'...quantitative researchers collect facts and study the relationship of one set of facts to another.' Bell, 1993 (p5).* Also the researcher's measure by using scientific techniques which are likely to produce quantified and, if possible generalised conclusions

Through examining the attributes of quantitative methods, it can be clearly seen that quantitative studies uses a specific mode of language which is many ways is similar to that of scientific language; common terminologies such as experiments, variables,

control, and measurements. *(Bryman,1988).* Examples of quantitative methods now well accepted in the social sciences include survey methods, laboratory experiments, formal methods (e.g. econometrics) and numerical methods such as mathematical modelling *(Myers, 1997),* In addition to this *Bryan (1998)* has specified five main quantitative methods within the social science sphere, listing the types of features in each method and the benefits for each, these are; '*Social surveys'*, consists of random sampling techniques and measured variables, where representation and hypotheses testing is carried out, secondly, ''*Experimenting the stimulus'* as then accurate measurements can be achieved, thirdly, '*Official statistics'* of data collected to give a large quantitative of data, fourthly, observations which are '*structured'* and are pre-determined and finally, '*Content analysis'* This method is extremely useful for finding out about bias or prejudice images in the media as it has reliability of measures. *(Silverman, 2000)*

Some may argue that quantitative research looks more towards the study of people and their organisations in their natural and social settings as they believe that there is no difference between the natural and social world. As quantitative researchers tend to produce and test hypothesis rather than look at problems and questions within social life, statements like these are mainly pronounced by critics such as *(Filmer et al, 1972 cited in Silverman, 2000)* who tend to regard quantitative research as 'Positivistic', where positivist studies try to test theory, in an attempt to increase the predictive understanding of phenomena. In line with this *Orlikowski and Baroudi (1991, p.5 cited in Myers, 1997)* classified IS research as positivist if there was evidence of formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from the sample to a stated population . However by suggesting this most quantitative researchers would put forward an argument that they are not with the intention to produce laws of science, but have the intention to create increasing generalizations through sorting out relevant information.

Moving onto the qualitative approach, this research method begins with the concept of process, with views and emphasis upon the social context, qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomena *(May, 1997.)* Significantly, when gathering data and information Anderson held that a qualitative approach enables the researcher to really

understand another person, and qualitative research tends to focus on learners, central to the research project, and their views of the world. Others go a stage further and view qualitative research as a search for understanding in which *'...the principal concern is with ...the way in which the individual creates, modifies and interprets the world in which he or she finds himself or herself.' (Cohen and Mannion 1998, p8).* Also researchers who take on this qualitative approach, who are open to individual perceptions, were felt by Bell (1993) to '…seek insights rather than statistical analysis.' *(Bell,1993, p6).* So in other terms Qualitative research focuses upon how to study people and their organisations in their natural settings. Qualitative researchers tend to look at problems and questions rather than produce and test hypotheses, which is quite the opposite to quantitative methods, the research is described in words rather than numbers and draws from a range of methods, it is particularly useful in areas where there is little pre-existing knowledge, where it is difficult or inappropriate to produce a hypothesis and where issues are complex and require in-depth exploration.

There are many characteristics within qualitative research method, looking at the approach concerned with that meaning of the information is considered most important, the method allows greater freedom for the subjects of the research to determine the information gathered, so, quality and richness of information is often greater.*(Miles and Huberman 1994)*. Qualitative research is renowned for its participation observation approach, where the researcher tries to maintain a close and trustworthy relationship with his subject, they do this by becoming involved physically and mentally in the subject's life and the surroundings, which provides flexibility, here seen as an advantage, because it enables researchers to consider new ways in which meaning is developed, formed and functioned. *(May, 1997)* An example of participation observation is reflected within Alison Anderson's (1997) study upon a detailed account into the interlink between the media and cultural construction of environmental matters. Where Alison undertook in depth examination of the constraints and pressures of politics and the environmental lobby (May, 1997), thus within the theory of this research, the outcome brought forward a general understanding of its context and ways in which to represent the social world, through the process of generation and modification.

Qualitative methods consist of three kinds of data collection; *In-dept and open-ended interviews*, *Direct observations and written documents*, written documents, including such sources as open-ended written items on *questionnaires* and personal diaries. (*Miles and Huberman 1994*), the data from *open-ended interviews* consist of direct quotations from people about their experiences, opinions, feelings and knowledge. The data from *observations* consist of detailed descriptions of participant's behaviours, and the full range of human interactions.

When looking at both of the approaches within the same light, of comparing and finding the common characteristic within both, it may seem like a challenge as they both come from very different historical backgrounds. However when looking into detail at both, there can be significant signs of common similarities which go unnoticed due to the stigma of the quantitative versus quantitative debates. Major basic similarities can be identified without the need of much effort, such as; both methods are used for answering a research question, also use on similar information gathered from the social world, analysis and interpretation of the data and most importantly the creation of new knowledge. From both ends of the spectrum, researcher tend to familiarised with quasi-quantitative terms, like *'frequently' , 'some'*, *'many'* and so fore.*(Bryman, 1988).* Also researchers have used structured interviews for random collection of both quantitative and qualitative information, this signifies that there are common features within both, for example Ford et all, (1982) set out such types of interviews to investigate employers recruitment practises. *(Cited in Bryman, 1988)*

Qualitative research methods are considerably different from those of quantitative research methods. As qualitative research methods are considered to be more dynamic, interactive and holistic in their approach than quantitative methods which are considered more deductive in their reasoning, objective in their observations, more defined and static in their collection, analysis and reporting. Whilst qualitative methods provide a more narrative and detailed reports of certain issues, however quantitative methods allow for the study of larger populations and therefore can allow for more generalizations about a phenomenon. The researchers methods of researching will be dependent on which approach they undertake, for example; qualitative research would be linked to the researchers involvement with the subject,

as qualitative is recognised for the researchers role or construction of data *(Myer, 1997)*, whilst quantitative research most often links itself with the researcher detachment, this can be understood when thought of in a way that quantitative research is aimed to produced numerical representation that are objective and the researcher does to coincide with the research but act as an independent figure with no influence upon the research.

There is the constant debate between the approaches, as it is reflected from the researchers themselves; In Miles and Huberman's 1994 book *Qualitative Data Analysis*, quantitative researcher Fred Kerlinger is quoted as saying, *"There's no such thing as qualitative data. Everything is either 1 or 0" (p. 40).* To this another researcher, *D. T. Campbell, asserts "all research ultimately has a qualitative grounding"* (*Cited in Miles and Huberman, 1994 . p40*). This back and forth mockery among qualitative and quantitative researchers is "essentially unproductive" according to Miles and Huberman 1994) However, because typically qualitative data involves words and quantitative data involves numbers, there are some researchers who feel that one is better. Also another major difference between the two is that qualitative research is inductive and quantitative research is deductive. In qualitative research, a hypothesis is not needed to begin research. However, all quantitative research requires a hypothesis before research can begin. Some may argue that the motivation for doing qualitative research, as opposed to quantitative research, comes from the observation that, qualitative research methods are designed to help researchers understand people and the social and cultural contexts within which they live. They argue that the goal of understanding a phenomenon from the point of view of the participants and its specific social and institutional context is largely lost when textual data are quantified. *(Kaplan and Maxwell (1994) cited in Myer, 1997)*

Although there are clear differences between qualitative and quantitative approaches, it is important to bring to attention that qualitative and quantitative methods can be used in conjunction with each other, this is termed as triangulation, where the use to two or more methods are combined together. *(Cohen, and Manion, 2000).* Combining the qualitative and quantitative techniques can bring some advantages of both and enrich the research process and its results. As through triangulation using several different methods to collect the data, it is more complex to look at a topic from different perspectives and compare different outcomes and therefore the all in one an idea has more of a chance to produce similar results or implications, as triangulation allows for more accurate interpretation of a topic and a more rounded picture therefore it can be stated as having a higher validity

Concluding on comparing and contrasting quantitative and qualitative approaches, it can be suggested that to certain extent, that there are advantages and disadvantages within both approaches, as each method has its suitability's and each has its draw backs, quantitative research often "forces" responses or people into categories that might not "fit" in order to make meaning and qualitative research, on the other hand, sometimes focuses too closely on individual results and fails to make connections to larger situations or possible causes of the results. As these points have been acknowledged, rather than downplaying either approach for its drawbacks, through combined research it should find the most effective ways to incorporate elements of both to ensure that their studies are as accurate and thorough as possible, as *'Any research project is likely to raise ethical issues. This is particularly so if it involves people directly, but may also be the case even if you conduct your research entirely on documentary evidence.'* (*Blaxter et al 1997, p146).* It is clear that both methods are also supported by different aspects of quality, credibility, reliability and validity throughout their methodology, as whichever method is used for a particular study, it can be suggested that the method used should be appropriate for the subject being studied.

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