Positivism interpretivism and pragmatism psychology essay



Hussey Hussey say that methodology makes reference to the whole approach considered, as well as to the theoretical basis from which the researcher comes, and that method is the various ways by which data is collected and analysed.

In this chapter, the reseacher has presented a brief review of the different research philosophies; positivism, interpretivism, and realism (Fisher, 2007), the philosophy that has adopted for the current research, the different research approaches; qualitative, quantitative and mixed-method and the approach adopted for the research. The other parts consist of the different types of research design; exploratory, descriptive, explanatory, and the research design adopted, the qualitative and quantitative phases consisting of sampling, data collection and data analysis, questionnaire design, validity and reliability, data analysis. The last part consists of the ethical issues and a conclusion.

3. 2 Research philosophy

As mentioned in the introduction, there are three main types of research philosophies, namely, positivism, interpretivism, and pragmatism (realism).

3. 2. 1 Positivism

The term 'positivism' was found by Comte in the nineteenth century and he related it to the force of science and of systematic thinking to understand and control the world (Fisher, 2007). The aim of positivism is to produce general rules to forecast behavior with a minimum margin of uncertainty. However, there are problems with this philosophy, one of which is that it can only predict average behavior of individuals in a group and not the behavior

of each individual (Fisher, 2007). Nonetheless, research based on a positivist philosophy tends to be based on deductive theorising, where a number of propositions are generated for testing, with empirical verification then sought (Babbie, 2005). Considerable data are often required as a positivist study would favour the use of quantitative methods to analyse large-scale phenomena (Travers, 2001). Inherent in this overall approach to research is the view that it is possible to measure social behaviour independent of context and that social phenomena are 'things' that can be viewed objectively (Hughes & Sharrock, 1997).

Interpretivism

This philosophy is on the other extreme of that of positivism. Researchers who adopt this philosophy consider reality as socially constructed, that is, their meaning of reality is affected by their values and their way to see the world; other people's meaning; the compromises and agreements that come out of the negotiations between the first two (Fisher, 2007). Interpretive research has been classified as gnostic because it does not agree to the fact that there is the existence of a systematic analysis of any particular subject; instead, it gives importance to multiplicity, relativity and complexity (Fisher, 2007).

It is an attempt to understand the processes by which we gain knowledge and so it has affinity with the original gnostic search for one's true self. A characteristic of interpretive research is that one cannot understand how others may make sense of things unless one has a deep knowledge of one's personal values and thinking processes, which in research terms the

knowledge is known as reflexivity (Fisher, 2007).

Realism

Realist research is an approach that resembles to a large extent that of positivism but takes into consideration, and comes to terms with, the subjective nature of research and the paramount function of values in it (Fisher, 2007). Realism still aims to be scientific but makes fewer claims to knowledge that perfectly mirrors the objects of study. Researchers with this stance recognise that things such as 'strategy' and 'job satisfaction' cannot be measured and studied in the same way as can chemical and physical processes. However, they do believe that a worthwhile attempt can be made to fix these subjects and treat them as if they are independent variables.

3. 2. 2 Research philosophy adopted

The correct choice and understanding of philosophical orientation is of extreme importance to allow the selection of the most convenient methodology to facilitate the gathering of the relevant data (Remenyi et al, 1998; Blaxter et al, 2004), especially as poor understanding of philosophical issues can seriously lower the quality of the research (Easterby-Smith, 2006).

Having studied the different philosophical approaches and considered the nature of the current research, the researcher has decided an overall view of a student's attitude and perception was necessary so as to get a better understanding of students' views. This type of research required the participation of a large population sample, which in turn created large amounts of numerical and statistical data and information, which needed to be quantifiably analysed. When all these factors were taken into account, realism was the most appropriate philosophical approach to answer the research questions and meet the objectives of the current research.

3. 3 Research approach

3. 3. 1 Quantitative approach

Quantitative methods are most often associated with the positivist epistemology, and they consist of counting and measurement of events and statistical analysis of a body of numerical data (Mc Laren, 2012). An important feature of the quantitative method is the collection of numerical data (Jack & Clarke, 1998) which can ultimately be subjected to statistical procedures (Carter 2000a).

3. 3. 2 Qualitative approach

Qualitative research consists of the study of events in their natural settings, with a view to making sense of, or interpreting, events of how people interpret (Mc Laren, 2012). Normally, in the empirical type of approach the responsibility is on researchers to direct and control methods to attain objectivity, thus making sure that their findings are valid as their intentions and emotions would not be seen as a barrier with data collection and analysis (Mc Laren, 2012).

Mixed method approach

Mixed methods embrace a method and philosophy that combines the insights provided by qualitative and quantitative methods into a workable solution. Mixed methods research makes full use of the positive parts of both qualitative and quantitative methodologies by combining approaches in a single research study to enhance the scope of understanding (Johnson, Onwuegbuzie, and Turner 2007).

3. 3. 2 Research approach adopted

As mentioned by Bryman (2007), a combination of qualitative and quantitative results would lead to a better understanding of the data and help in a better way to answer to the research objectives. As the education sector research field keeps on changing, so too does its methods and therefore the researcher has used the mixed method approach for the current research.

3. 4 Research design

3. 4. 1 There are three main types of research design, namely, exploratory, descriptive and causal.

Exploratory design

This design places a lot of emphasis on gaining ideas and insights. An exploratory study intends to explore "what is happening; to seek new insights; to ask questions and to assess the phenomena in a new light" (Robson, 2002, p59). It is important mainly when there is very little information known about the phenomenon. In a type of mixed-method design, the qualitative data are gathered first and a quantitative phase follows. The purpose of this kind of study is typically to use the initial, qualitative phase with a few individuals to identify themes, ideas, perspectives, and beliefs that can then be used to design the larger-scale, quantitative part of the study. Often, this kind of design is used to develop a survey. By using a qualitative component in the beginning, researchers are able to use the language and emphasis on different topics of the subjects in the wording of items for the survey.

Doing so increases the validity of the scores that result because they will be well matched with how the subjects, rather than the researchers, think about, conceptualize, and respond to the phenomenon being studied.

Explanatory design

Explanatory study aims to find out the causal relationships between variables (Saunders et al., 2007). In an explanatory design, which may be the most common type, quantitative data are collected first and, depending on the results, qualitative data are gathered second to elucidate, elaborate on, or explain the quantitative findings. Typically, the main thrust of the study is quantitative, and the qualitative results are secondary. For example, this kind of design could be used to study classroom assessment and grading. A large sample of teachers could be surveyed to determine the extent to which they use different factors in classroom assessment and grading; this would provide a general overview of the teachers' practices. In a second phase, teachers could be selected who represent extremely high or low scores on the factors in the survey. These teachers could then be interviewed using a qualitative method to determine why they used certain practices. Thus, the qualitative phase would be used to augment the statistical data and thus explain the practices.

Descriptive design

Descriptive study seeks to provide a clear picture about the phenomenon as it already occurs (Hedrick et al., 1993). Research using a descriptive design simply provides a summary of an existing phenomenon by using numbers to characterize individuals or a group where it assesses the nature of existing

conditions (McMillan & Schumacher, 1997). The purpose of most descriptive research is limited to characterizing something as it is.

3. 4. 2 Research design adopted

Since a mixed method approach has been used for this research, a mixture of both exploratory and explanatory designs was used.

3. 5 Qualitative phase

Data to answer some questions was collected by using a qualitative approach. This allowed the researcher to get the opinion of Lower VI students about what they thought of private tuitions at S. C level (Appendix 2).

3. 5. 1 Sampling

For this part of the study, a reasonable and useful sample of four schools was chosen as mentioned by Mcmillan and Schumacher (1997) who made the argument that a good sample was one where the participants were readily accessible. The four schools were chosen with one in each educational zone, where 10 students were selected to ensure adequate information (Marshall, 1998). Due to the fact that I have used focus groups to collect data, 10 students were a reasonable sample per school.

3. 5. 2 Data collection

Focus groups

For the qualitative part of the study, data was collected from Lower VI students of the four selected schools by focus group interviews. The focus groups for the students had been chosen since they took less time and more

information was collected from different participants at the same time (Daymon &Holloway, 2002). Another advantage of focus groups was that the information obtained from the participants was of good quality since the individuals in the group got ideas from others (McMillan &Schumacher, 1997). The interview of each focus group was at least one hour and thirty minutes. A tape recorder was used to collect data which was later transcribed.

3. 5. 3 Data analysis

The data which had been recorded in a tape was transcribed and analysed.

3. 6 Quantitative phase

The information collected from the qualitative interviews in Phase 1 was used in the development of a comprehensive and valid questionnaire for quantifying the views of students on private tuitions. The items derived from the qualitative interview transcripts was administered to a large sample of students, including boys and girls and factor analyzed to uncover the internal structure of the views of the students on private tuitions.

3. 6. 1 Sampling

In this study, a mixture of purposeful and convenient sampling was used (McMillan & Schumacher, 1997). In order to determine the sample size, confidence interval approach was used which is based on the building up of confidence intervals around the sample means by making use of the standard error formula (Malhotra & Dash, 2007). By making use of the formula for determining the sample size for a population of 13902 students having taken part at the S. C examinations 2012, the researcher got a value

of 384. As a result, a total of 400 questionnaires were distributed to students of Lower VI, both from State and P. S. S. A colleges in all regions of Mauritius. The questionnaires were distributed equally among boys and girls to avoid bias in the collection of data.

3. 6. 2 Data collection

A letter was sent to each school to explain the purpose of the study and for permission to distribute the questionnaires to Lower VI students (Appendix 1). The questionnaire was handed personally to the selected students, the aims of the survey were explained and the filled questionnaires were collected after 2 days.

3. 6. 3 Questionnaire design

Most of the time, questionnaires contain two types of questions open ended or closed (Sinnott, 2008).

With open-ended questions the researcher gives the opportunity to the respondent as to how they write their answer making way to a more in-depth answer. However they are more difficult to classify into groups to facilitate analysis. A closed question will restrain the answer that may be given and usually asks the respondent to choose among a variety of possibilities given by the researcher.

However, closed questions help the respondent to complete the questionnaire quickly and they also help the researcher to classify the information and analyse the data with great ease (Sekaran, 1992; McNeil et al, 2005). For this research, a survey questionnaire was designed for the

collection of data which contains multiple options of Likert scaling from 0 to 4 for the variety of choice for the respondent (Appendix 3). The questionnaire consisted of six sections, with section A consisting of two questions on general information about private tuitions (number of hours students took private tuitions per week, number of subjects in which the students took private tuitions), section B consisting of nineteen questions on positive impacts of private tuitions at S. C level from the students' point of view, section C consisting of ten questions on the negative impacts of private tuitions at S. C level from the students' point of view, section D consisting of nine questions on the extent to which private tuitions at S. C level are replacing mainstream schooling from students' point of view, section E consisting of two questions with respect to improvement of academic performance from the students' point of view and the last section consisting of six questions concerning the demographic profile of the student.

3. 6. 4 Data analysis

The data was analysed using Statistical Package for Social Sciences (SPSS) version 20. The answer for each question provided by the student was fed into SPSS version 20. The gender of students, type of school, the region in which the student lives, the attempt at S. C examination 2012, the socioeconomic status of the student, the number of hours during which the student took private tuitions per week, the highest educational attainment of the student's parents were analysed by making use of pie charts and bar charts. For the sections B, C and D, an exploratory factor analysis (EFA) was done in order to group the answers obtained for the different questions into some main factors, with the Kaiser-Meyer-Olkin (KMO) test being performed

to verify whether EFA could be done. The different factors were found out by making use of the eigenvalue in SPSS version 20 which was set at a value of greater than 1. The factor loading of each variable forming part of each factor was also calculated by making use of the rotated matrix table in SPSS version 20. Some questions which were in the different sections had to be deleted due to cross loading, low loading factor, or theoritically the grouping of the question with others did not make sense. Secondly, hypotheses and sub-hypotheses were made for each research objective and each sub hypothesis was subjected to chi square testing where a crosstab was generated and the value of \ddot{i} and the p value were analysed, together with the phi value to see the degree of association, if ever.

Objective 1: To find out the positive impacts of private tuitions on the overall development of the student at S. C level.

H0: There is no relationship between private tuitions and the overall development of the student at S. C level.

H1: There is a relationship between private tuitions and the overall development of the student at S. C level.

In order to test for the above hypothesis, the following sub-hypotheses were tested for the different factors found by EFA.

Sub-hypotheses

Factor 1: Economic/career benefits

H0: There is no relationship between private tuitions at S. C level and economic/career benefits for the student in the future.

H1: There is a relationship between private tuitions at S. C level and economic/career benefits for the student in the future.

Factor 2: Better academic performance and more efforts

H0: There is no relationship between private tuitions at S. C level and better academic performance/more efforts.

H1: There is a relationship between private tuitions at S. C level and better academic performance/more efforts.

Factor 3: Increased level of socialisation with friends

Ho: There is no relationship between private tuitions at S. C level and increased level of socialisation of the student.

H1: There is a relationship between private tuitions at S. C level and increased level of socialisation of the student.

Factor 4: Better quality of teaching in private tuitions

H0: There is no relationship between private tuitions at S. C level and better quality of teaching.

H1: There is a relationship between private tuitions at S. C level and better quality of teaching.

Objective 2: To find out the negative impacts of private tuitions on the overall development of the student at S. C level.

H0: There is no relationship between private tuitions and the overall development of the student at S. C level.

H1: There is a relationship between private tuitions and the overall development of the student at S. C level.

In order to test for the above hypothesis, the following sub-hypotheses were tested.

Sub-hypotheses

Factor 1: Negative psychological affecting students concerning private tuitions

H0: There is no relationship between private tuitions at S. C level and the negative psychological factors affecting the student concerning private tuitions.

H1: There is a relationship between private tuitions at S. C level and the negative psychological factors affecting the student concerning private tuitions.

Factor 2: Deterioration of health of the student who takes private tuitions

H0: There is no relationship between private tuitions at S. C level and deterioration of the health of the student.

H1: There is a relationship between private tuitions at S. C level and deterioration of the health of the student.

Factor 3: Lack of family and leisure time faced by student who takes private tuitions

H0: There is no relationship between private tuitions at S. C level and lack of family and leisure time by the student.

H1: There is a relationship between private tuitions at S. C level and lack of family and leisure time by the student.

Objective 3: To find out to what extent private tuitions are replacing mainstream schooling.

Factor 1: Higher level of importance of private tuitions as compared to mainstream schooling

H0: There is no relationship between private tuitions at S. C level and their level of importance from the student's point of view

H1: There is a relationship between private tuitions at S. C level and their level of importance from the student's point of view

Factor 2: More care and attention from private tutors than teachers at school

H0: There is no relationship between private tuitions at S. C level and students getting more care and attention from private tutors.

H1: There is a relationship between private tuitions at S. C level and students getting more care and attention from private tutors

Finally, a multi regression analysis was carried out to investigate the whether there was a linear relationship between academic performance at S. C level, measured by the grade point average (G. P. A), and socioeconomic status of parents, intensity of private tuitions per week, region in which the student lived, and highest educational attainment of parents.

The grade point average is calculated by dividing the aggregate that the student obtained at S. C examinations 2012 by six since the aggregate is calculated for the 6 best grades. The grade point average has a range of 1. 00 to 9. 00. The lower the grade point average, the better is the academic performance of the student.

3. 6. 5 Validity and reliability

In this research, a mixed method approach was adopted which was an efficient way to collect data for specific variables of interest (Collis and Hussey, 2003). The survey questionnaire was developed to get data from students of Lower VI. Contact addresses and numbers were given in covering letter if participants encountered any problem (Appendix 1). It was assured that data would be confidential that can reduce the subject bias. Since the questionnaire was designed in a survey format, it did not face any observer error or bias.

Furthermore, items of the survey instrument reliability were measured by the internal consistency method (Hussey and Hussey, 1997). This study applied Cronbach's coefficient alpha to measure the internal reliability of survey, where a value of greater than 0. 6 showed fair to very good reliability.

Validity of the research was concerned with the extent of research findings which represented what was really happening (Collis and Hussey 2003). In order to avoid low validity, a pilot study was conducted before full scale data collection. Through the pilot study language or any other misconceptions was removed. The validity of each question into the main factors done by

EFA was checked by the factor loading in the rotated component matrix, where a factor of greater than 0. 5 showed that the question was valid.

3. 7 Ethical issues

Ethical issues are very important to take into consideration when carrying out a survey. According to Neuman (1995), the researcher must protect human rights, control them and make sure that people's interests are well respected. In this research, all ethical requirements were followed throughout all parts of the research. Before collecting data, permission was sought to the relevant institutions. The survey questionnaire along with supervisors' letter was provided during personal visits. The participants were asked to participate on a voluntary basis and given the opportunity to withdraw from participation if they felt to do so. Participants were informed that when they have answered and returned the questionnaire, it was assumed that they agreed to participate in this study. All participants were given the assurance that the answers provided will be kept anonimous and strictly confidential.

3. 8 Conclusion

The chapter starts with an examination of the research process including the philosophical approaches of positivism and phenomenology leading to a debate on the nature of the current research resulting in a mixed method being decided on. Data for this study was collected from students of Lower VI through a survey questionnaire after the qualitative phase which consisted of focus groups interviews. Upon completion of the study, the data was given a code which was fed on to the statistical package for social sciences (SPSS)

version 20. 0 for Windows. Lastly, the ethical issues involved in this study were also presented.