

Major characteristics of qualitative research



CHAPTER 3

RESEARCH METHODOLOGY

3. 0 Introduction

In this chapter, researcher will explain in detail on how the research will be conducted. This includes the research design chosen by the researcher, the research procedures, sample selection, methods of gathering data, and methods of data analysis used. In explaining the methods and procedures employed, the researcher also explains the rationale for choosing the particular methods and procedures conducted in this research.

3. 1 Research Design

Patton (1990) in Fraenkel and Wallen (2006) described one of the major characteristics of qualitative research is design flexibility where they suggested that a qualitative research should avoid from stick on a rigid designs or situation so that the situation can be understood in-depth. They also recommended a qualitative research should pursue new paths of discovery that suits with the researcher interest. From his own reading and opinion, the researcher would like to define qualitative research as a type of scientific research. It is because; generally scientific research consists of a proper investigation that seeks for answers to a question systematically by uses a predefined set of procedures. In order to answer the questions, researcher collects evidence and produces findings that were not determined in advance and that are applicable beyond the immediate boundaries of the study.

Therefore to carry out his research qualitatively, the researcher would like to use case study as the method for the researcher to conduct this research.

Case study is one of methods to conduct qualitative research where Robert Stake (1997) defines a case as a bounded system as it tells a story about a bounded system. A system refers to a set of interrelated elements that are wholesome while bounded outlines the boundary of the system (Holmes et al, 2008). However the researcher himself need to determine the case first and later the researcher will uses various data collection techniques such as interviews, observation through literature, and relevant documentary analysis to carry out a holistic study of the entity. By using case study, the researcher will actually attempt to investigate the components or parts that make up the system to see how they operate. By refer to this research; the researcher will investigate the science curriculum of Steiner Waldorf education as he will compare the curriculum with Malaysian science curriculum.

At one hand, the researcher will look at the important components of curriculum of both Malaysian and Steiner Waldorf education. On the other hand the researcher will compare both curriculums in order to look at the strength and the weaknesses in Malaysian science curriculum as compared to Steiner Waldorf's. Hence, the researcher believes that the researcher will experience the personal contact and insight as well as holistic perspectives on both curriculums by using case study and comparative analysis.

3. 2 Research Methods

According to Fraenkel and Wallen (2006) qualitative research employed three main techniques to collect and analyze data which are observing

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people and classroom, interviewing the subject as well as analyzing documents or other forms of communication. Therefore for the data collection the researcher employed the three different methods namely observations, interviews, and document analyses. By employing more than one methods, the researcher believe it will help to triangulate the data, to provide multiple sources of evidence as well as to increase the validity and reliability of the findings of this research. Below here are the explanations on each method:

3. 2. 1 Observations

Observation basically conducted in order to investigate something that the researcher unfamiliar with. Because of that, certain kinds of research questions can best be answered by observation (Fraenkel & Wallen, 2006). According to Holmes et al (2008) observation can be classified according to the role that the researcher plays. Fraenkel and Wallen (2006) suggested the same and as follow;

Participant Observation, the researchers actually participate in the situation or setting they are observing and when the researcher takes on the role of a complete participant his identity is not known to the other members of the group or another role that could be play by the researcher is as participant as observer. This is where the researcher participates completely in the activities of the group being studied and on the same time telling the group clearly that he is doing research.

Non-participant Observation, “ sit on the sidelines” where the researcher does not participate in the activity being observed or actually he is indirectly

involved with the situation being observed. There two roles that the researcher could play. First as observer as participant where the researcher immediately identifies himself as researcher and do not have to pretend as a member of the particular group being studied. Second one; the researcher could be complete observer which is totally contradicted with complete participant. The presence of the researcher may or may not, realize by the group because the researcher is actually observes the activities without any intention to participate.

For this research, the observations carried out by the researcher were actually used both types of observation. In one situation the researcher plays his role as ' participant as observer' and in yet, another situation, the role changed to observer as participant. The researcher adapted with the change of situation where it involved time and purpose of the observation. For example when the researcher participated in the programs organized by the Steiner Waldorf department in Plymouth the researcher also carrying out his observation and informed the member of the group that he was carried out observation for his research. However during his visit to the Steiner school in Plymouth, he was no longer participant as observer; instead, he was observer as participant where he observed the teaching and learning process, condition and environment of the school as well as the activities that the school had along that day.

It was same with the observation carried out by the researcher in Malaysia. The researcher plays his role totally as ' observer as participant' with the groups of students and teachers involved in this research. However when it involved with his personal experience as in-service teacher, he was actually

a complete participant, where he observed the phenomenon occurred in the group that he studied without telling them the actual situation. But it was a very minor part from the observations that the researcher carried out.

3. 2. 2 Interview

Interview is a common tool usually used in qualitative research. It is used by researcher to know and understand people's experiences and their inner perceptions, attitudes, and feelings of reality (Zhang. Y, 2006). By referring to its structure, interview can be divided into three categories: structured interview, semi-structured interview, and unstructured interview (Fontana & Frey, 2005) and as in Frankael and Wallen (2006) the unstructured interview term is used as informal interview.

Structured interview is the interview that has a set of predefined questions and the questions asked to the respondent in the same manner. Structured interview is similar to survey and questionnaire except that it is conducted verbally rather than in writing.

Semi-structured interview can best be described in terms of the flexibility in the interview process. Just like structured interview, this type of interview consists of a series of questions which designed to elicit specific answer from respondent. However it usually more open-ended than questions in a structured interview but in the course of interview, interviewers has a flexibility to adjust the sequence of the questions to be asked and add questions based on the context of the conversations.

Informal interview as the term implies shows that the interview conducted is less formal as compared to structured or semi structured interview. It is also

similar to a casual conversation and basically carried out to pursue the interests of both the researcher and the respondent in turn. This type of method is commonly used in qualitative research.

For this research, the researcher carried out the three types of interview. Informal interviews were used by the researcher at the initial part of this research. The interviews were conducted on few teachers, lectures and students in the attempts to find out the problem of Malaysian science curriculum. During his visit to Plymouth, the method changed to semi structured interview as the researcher hoped to gather as much information as possible to gain some insight about the Steiner education.

The questions designed basically to help the researcher to get the intended answer from the respondents. Time is always being the limitation of any research. Therefore when the researcher traveled back to Malaysia, the researcher still hopes that he could get more information about science curriculum from the Steiner education. Therefore he conducted email interview with few Steiner teachers, lecturers and its ex-students. In the email the researcher explained briefly about research that he conducting as well as instruction how the respondent should answer the questions. The researcher classified the email interview method as structured interview in the sense that questions asked were fixed (in term of number) and no further probing were carried out. Email interviews conducted by the researcher as part of ' member check' which is a term of method that use in qualitative research to verify what the researcher had understood based on the previous interviews, observations and document that he analyzed or as mean of validating via triangulation.

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3. 2. 3 Document/Content Analysis

It is a technique that allow the researcher to study human behavior in an indirect way such as through an analysis of human communication, written content of communication, textbook, essays, newspaper, journals, magazines, articles and others (Frankael & Wallen, 2006). Content analysis also has been defined as a research method for the subjective interpretation of the content of text data through the systematic classification process (Hsieh & Shannon, 2005) and also as an approach of empirical, methodological controlled analysis of texts within their context of communication (Mayring, 2000).

Therefore in this research “ document” refers to written sources that the researcher have obtained from the online sources (articles, reports and journals) and other written sources such as books that explain about Steiner and Malaysian science curriculum. The documents gathered include official publications which discuss the aims and objectives of science education and other aspects of curriculum such as implementation, assessment and the performance. These different documents were analyzed and discussed in relation to the findings gathered through observations and interviews carried out by the researcher previously.

3. 3 Research Procedures

Since this is a comparative study between 2 different curriculums, there are procedures that need to be carried out by the researcher in two different countries which is Malaysia and Britain. Therefore, the researcher will explain the procedures in number of different stages as detailed below;

Stage 1

To identify the problem about the Malaysian science curriculum, the researcher had informal interviews with few senior teachers and lectures with science education background. Besides that the researcher also conducted few informal interviews with students in mainstream science class. The idea to compare the Malaysian and Steiner science curriculum actually came from colleagues who had general idea about the Steiner Waldorf education.

Stage 2 (Initial Study)

The researcher gathered information about Steiner education including the history, approaches and its curriculum as well as read about the research conducted on Steiner education. At the same time, the researcher also contacted the Head of the Steiner Waldorf education in University of Plymouth and liaises with the Senior Tutor of the Industrial linkages of that university via email to establish rapport before the visit to Britain. Meantime, the Head of the Steiner Waldorf department helped the researcher to organize Steiner and science related programs for the researcher to attend during the visit and one of which is a visit to a Steiner school in Plymouth.

Stage 3

Prior to conducting this research in the UK, the researcher needed to obtain permissions from the following parties:

The Dean of Faculty of Education of University Teknologi Mara (UiTM) to obtain permission to submit the proposal to the UiTM International Linkages Centre (UiLC);

The Head of UiLC for the approval of the fund needed by the researcher to conduct this study in Britain;

The Vice Chancellor of UiTM to obtain the approval for the researcher to conduct this study in Britain; and

The Head of Steiner Waldorf Department in University of Plymouth for permission and to be involved in this research.

Stage 4

When in the UK, data was gathered or obtained through varying sources and methods as highlighted assistance earlier, namely subsequent

Joined a week program organized by Steiner Waldorf Department in University of Plymouth. The program also involved a class of first year students who doing their Bachelor in Steiner Education;

Group interview with the few lectures and students from the Steiner Waldorf Department;

Interview with the Head of Steiner Waldorf Department in University of Plymouth;

Educational visit to one Steiner school in Plymouth where interviews were carried out with a few teachers from different backgrounds;

Observation of one science lesson; and one practical or experiment session; and

Exchange of emails with the few science teachers, lecturers and students who graduated from Steiner schools.

Stage 5

Once the intended data were obtained from the UK, this stage will more focusing on data analysis and to find more evidence to further support the earlier findings.

Conducted email interview with few Steiner science teachers, lectures and ex-students.

Doing analysis on documents about Steiner curriculum specifically on science.

Conducted a group interview with students from 2 different schools in Petaling district.

Analyzed data gathered.

3. 4 Sampling Strategy

A sample in a research study is the individual or group on which information is obtained (Fraenkel & Wallen, 2006). Another opinion, a sample consists of a group of individuals drawn from the population where the sample is actually a fraction from the whole population (Holmes et al, 2008). A group of sample can be very small or maybe quite large depending on the number of population as the sample drawn is actually supposed to represent the entire population. There are two major types of sampling which is probability sampling and non-probability sampling.

For this research, the researcher chose purposive sampling and convenience sampling when conduct this research. A convenience sample is group of individuals who (conveniently) are available for study while purposive sample is chose based on the researcher judgment where the sample is believed could give useful information for the research (Fraenkel & Wallen, 2006). On the other perspectives, Holmes et al (2008) in his book stated that purposive sampling is a way where the researcher, in choosing sample, considers the subjects that belong to a specific group. Basically this method is appropriate for a topic that has not been studied much before while convenience sampling is a means studying of whomever or whatever is available.

In attempt to study on Malaysian and Steiner Waldorf's science curriculum, the researcher was actually blended the method in sampling. Even though the sample might involve personal networking of the researcher, there were few aspects that the researcher gave due consideration and judgment. That is why the researcher chose to use purposive and convenience sampling. In order to understand a phenomenon from perspective of participants, the researcher chose sample who gave more useful information. In addition, the researcher also look at the participation, willingness and cooperation of the sample to involves with the research so that it will made much easier for the researcher.

3. 5 Sample

3. 5. 1 Sample for Malaysian Science Curriculum

The samples that the researcher chose to gather useful information regarding Malaysian science curriculum can be divided into three categories, <https://assignbuster.com/major-characteristics-of-qualitative-research/>

namely as; expert (lecturer with science education background), practitioner (teacher) and students.

3. 5. 2 Sample for Steiner Waldorf science curriculum

The samples that the researcher chose to understand about Steiner Waldorf education and its science curriculum also can be divided into three categories, namely as; expert (lecturers with Steiner education background and Steiner science education background), practitioner (teacher) and students.

3. 6 Data Analysis

Data analysis is one of the important parts in any research. It requires systematic procedures to manage the data gathered and the ability to analysis the data critically and thoroughly. However, to carry out the analysis, researcher will use the research questions and research objectives that constructed earlier as the guide. He believes that, it will help the researcher to shows the right direction of the exploration of the data.

As the researcher employed observations, interviews and document analysis as the methods to gather the data, each method will undergo different levels of analysis at one point and later will be combined as a rich data that will be able to answer the research questions. Any notes that made by the researcher during his observations, informal interviews, transcript of email interviews, videos recorded, journals, and any publications related were organized accordingly into its own category.

Next, the data were analyzed in order for the researcher to look at any existing patterns or themes and help the researcher to identify basic

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features of the data. This will help the researcher to develop and document a database structure and on the same time to describe about the data extensively by using qualitative software. The software will allow the researcher to code, retrieve and analyze data which could make the rich data become more organized and useful.

3. 7 Summary

The framework of this research took place within qualitative procedures since the aim of this research is compare the Malaysian and Steiner Waldorf science curriculum. Interviews conducted with the teachers, lectures and students from both systems as well as the observation that the researcher carried out in Malaysia and Britain were the main research tools. The information gathered was supported by the analysis of documents such as journals, articles, official publications and several ministry documents related to science education. The data transcribed with the aid of qualitative data analysis software helped the researcher to come out with the findings of the research.