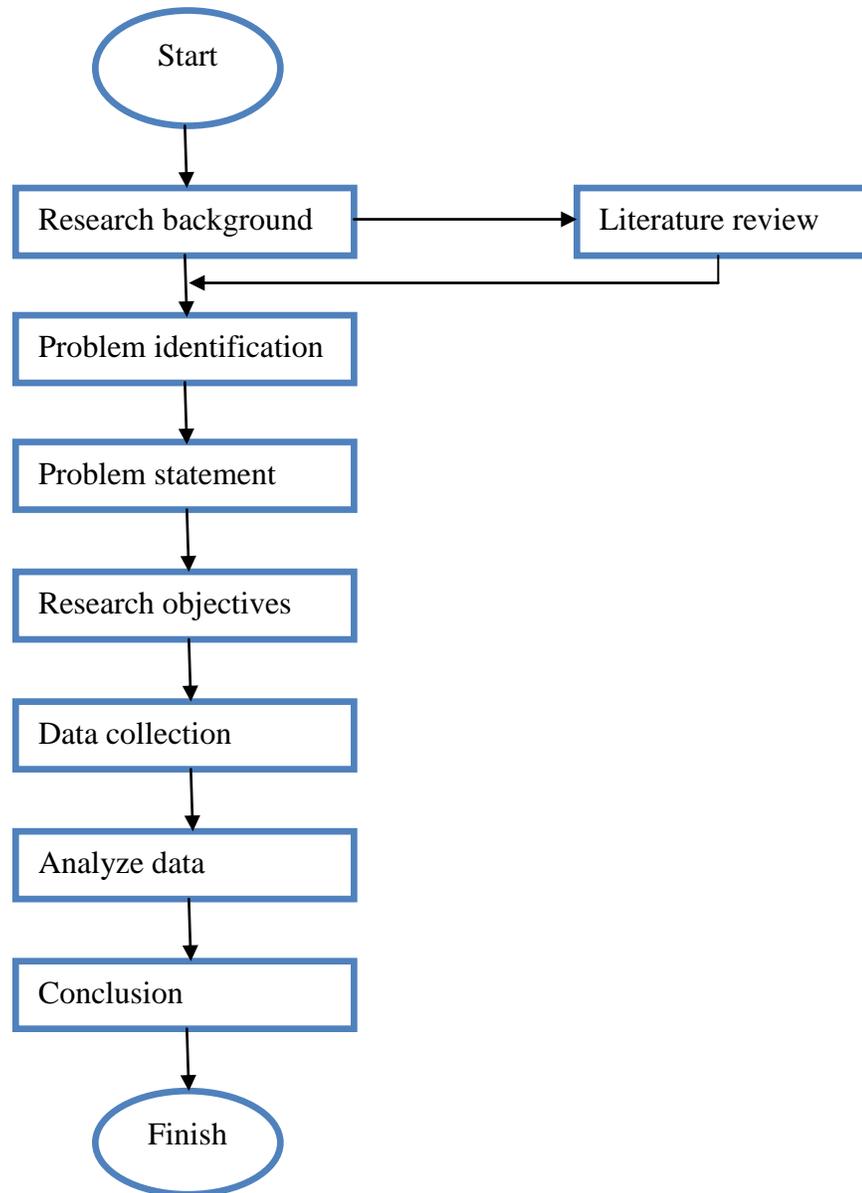


## **CHAPTER 3**

### **METHODOLOGY**

This chapter describes the research methods that will be used to conduct this study. Research methodology is a set of procedures or methods used to conduct research. It can be defined also as the study or the description of method. A methodology can be considered to include multiple methods, each as applied to various facets of the whole scope of the methodology. There are two types of research methodologies. These two types of methodologies are qualitative methodologies and quantitative methodologies. Both methodologies will be used during the analyzing phase. Qualitative research involves the use of qualitative data such as interviews, direct observations, survey and analysis of documents and material. Direct observation and experimental analysis are the research method for this research. The flow chart below shows the steps that have been taken in doing this research.

### 3.1 METHODOLOGY



**Figure 3.1:** Flow chart of research methodology

## **3.2 EXPLANATION OF FLOW CHART**

### **3.2.1 Field Research**

Field research deals with creation and collection of actual and authentic information by field of operation in any organization. It is also can be defined as the collection of information outside of the laboratory and workplace setting. The process involves determining what precise data is necessary and from where this information needs to be obtained, methods: informal interviews, direct observation, participation in the life of the group, collective discussions, analyzes of personal documents produced within the group, self-analysis, and life-histories. At this stage, the method used is focus on the direct observation in order to collect the information in general view of the problem at the selected company. First of all, a company must be selected to make the observation and case study. The selection of BI Technologies as the area of research because of the company has the quality issues that lead to the high number of defect in product. After that, the direct observation has been done at the company. The purpose of this observation is to collect the general view of information such as company profile, their product, and others.

### **3.2.2 Problem Identification**

Problem identification is actually seeing the problem before trying to solve it. In other word, it is a first strategy in solving a problem. First, it has to realize and accept there is a problem. Once the problem have identified, then do the observation and reflect what is going on, gather the information that is related and begin working on the solution. For this step, the problem that has been identified is the high number of defects occurred in moulded inductor part.