

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

In the analysis process, the undergone primary goal is to achieve the objectives of the project and require multiple steps to get the complete and successful results. It covers all parts and procedure that related to the research design of the existing project which is about video analysis of football game. There are about four main parts that need to use in this project which are study the existing research, design the concept of the project, calculation and analysis, then the most important is the final result.

3.2 DESIGN PROSESS FLOW

The Figure 3.1 shows the design flow of the project.

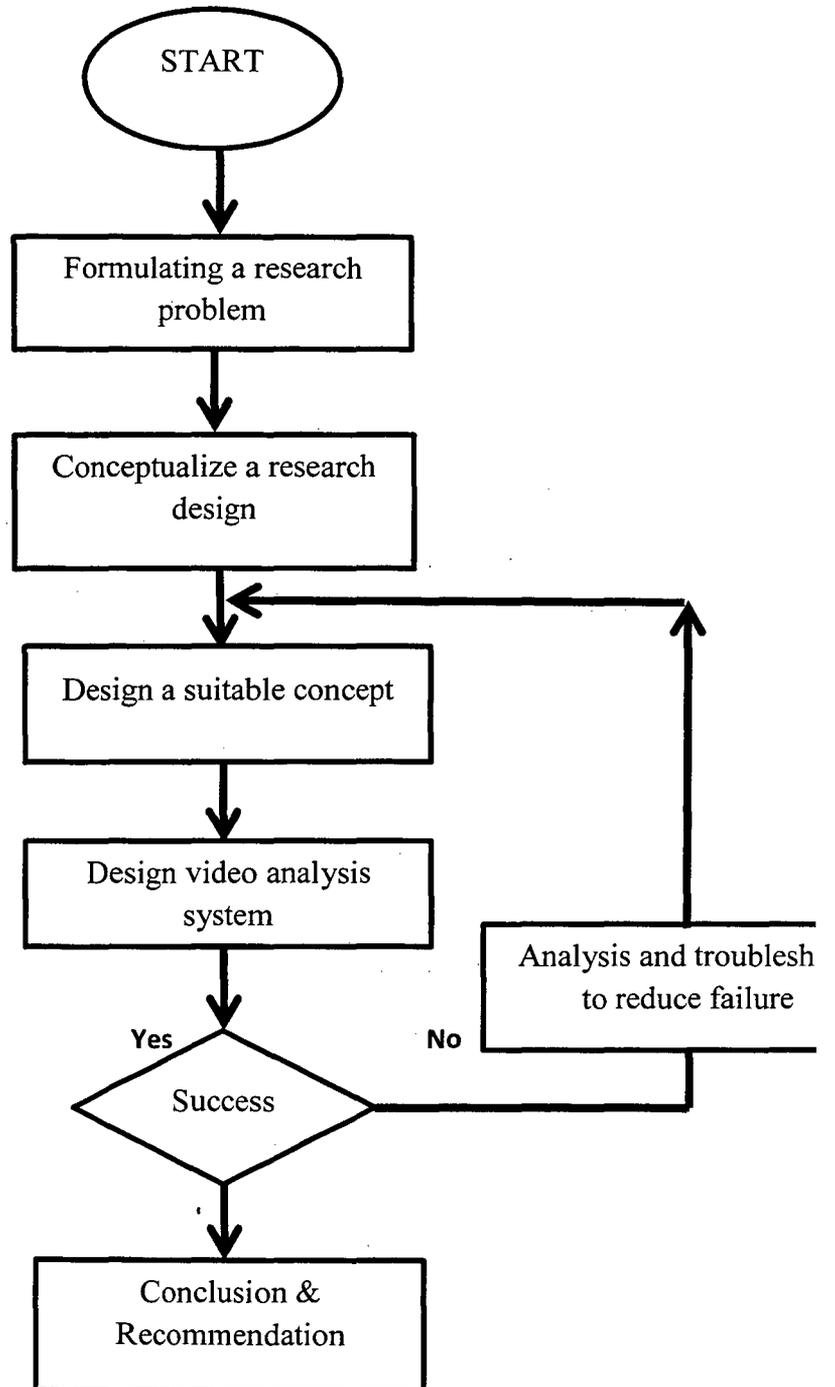


Figure 3.1: Design process flow

3.3 DESIGN STUDY OF THE PROJECT

Design study is one part of the process to carry out a project which is begin with the basic step based on the system and related to the existing previous sources. In a lot of resources that already exist for many years, some of them are very relevant to what is being sought, which are detection of football, tracking and analysis parts of various even though they had different capabilities. Furthermore, in the recent years, various of research in game analysis has been increased in variety of aspects. By using the system term, most of the systems are works on pre-recorded video of football games in broadcast videos. Through the system used, there are many positions of the cameras that used, but some of the system used fixed cameras that have been positioned in stadium. Camera position will be considered whether it is above or below. Various of information can be collected through a journal that has been read, such as design concept of the experiment. From overall design study, there are four existing design concept can be customized in order to develop new football detection, tracking and analysis system.

3.3.1 Concept 1: Ball tracking and virtual replays

In this project, Gopal Pingali, Agata Opalach, Yves Jean et al. Ball Tracking and Virtual Replays for Innovative Tennis Broadcast. (2000, p. 152-156) presented the real-time vision system by the computer that can tract the motion of tennis ball. We also can apply this system on soccer game analysis because they have similarity with the speed and tennis ball is smaller than soccer ball.