CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter discussed about the methodology and techniques that will be used to develop the system. Methodology is a system methods used in particular area of study [7]. For example, steps, tasks, methods, tools and techniques that brings in more details. It consists of a set of method used to produce complete software from the planning phase till the documentation phase.

3.2 ADDIE Model

The project of e-DOA mobile application for Autism Children is using ADDIE model as the methodology. ADDIE is an Analysis, Design, Development, Implementation and Evaluation [2]. It is an instructional model which mostly applied on developing educational courseware as to construct a performance-based learning aid. ADDIE was constructed based on current style of learning, because children's ways and their interests towards education are different for certain generations. From the model below, there are five (5) stages involve in the ADDIE model which are:
3.2.1 Analysis

Analysis phase should answer all 5W1H questions (What, Why, Where, Who, When and How) before developing a courseware. A designer needs to identify and consider:

i. Learning problem before the project is construct

ii. The goals and objective of the project

iii. The audience needs for the project

iv. Existing knowledge about past systems

v. Learning environment to users

vi. Any constraints that might be occur during developing phase

vii. Timeline for the whole project phases

3.2.2 Design
Design phase leads to the development of the learning objective and the ideas. Choose a course format or the medium by which the course is presented to the learners. Design the content should include learning and assessment method. Learner participation important to review the feedback of the user whether they understand the courseware is about. Besides, the storyboard and prototypes of the details project will be done at these phase. Designer should make sure the multimedia element and the interactivity are suitable for the scope users.

3.2.3 Development

During development phase, the blueprint of the project will be integrated into the real system. The content according to what we discussed in design phase and should parallel with the project's goals. All the multimedia elements as planned should be input and apply. Besides, designers have to develop the course materials and conduct a run-through before the final release.

3.2.4 Implementation

Designer should create a sample such as instruction or manual on how to use the courseware to the user. Make sure the courseware satisfy the objectives of the project. Other than that, designer should prepare the learners with the correct tool of knowledge and arrange the learning space for them.