

CHAPTER V

CONCLUSION

5.1 INTRODUCTION

This chapter summarizes the whole study and concludes the findings. A review on how the research objectives have been accomplished at the five phases is also presented. The conclusion is made based on the design, result and the statistical analysis. Finally the limitations of this study are discussed and some recommendations for future works are made at the end of this chapter.

5.2 ADDRESSING THE RESEARCH OBJECTIVES

Three main objectives were identified prior to conducting this study that aims to develop a prototype multimedia courseware for literature learning using storytelling approach. The study has been carried out to meet the first objective before proceeding to the next and so forth. The accomplishment of each task that meets the individual objective is summarized as follows:

- 1. To study and design a simple model for storytelling that can be used as a guideline during the multimedia courseware development*

A simple model of storytelling for the multimedia courseware development has been designed according to the methods proposed by MJO and Per Christiansson. The developed model consists of three stages as suggested by the MJO method.

The first stage consists of the analysis of the story content that is designed as the story board. The second stage involves the creation of the story using Macromedia Flash software and applying multimedia elements to the story. Finally the interactive multimedia story telling is created in the third stage by combining the multimedia elements and interactivity elements. The interactive elements used in the prototype storytelling courseware are as suggested by Per Christiansson and consist of control, interactivity, status, scenes, synopses and, user. Hence, the first objective is achieved.

2. *To develop a prototype multimedia courseware for English Literature story by incorporating storytelling approach, educational theories and multimedia elements such as text, graphics, animation, audio and interactivity*

A prototype Black Cat multimedia courseware which incorporates the three components of storytelling approach, educational theories, and interactivity has been successfully developed. The storytelling approach adopted in the courseware is interactive multimedia storytelling. The educational theories adopted are behaviorism, cognitivism and, constructivism, which are the three learning theories that have been recognized as useful to enhance learning. Hence, with the development of the Black Cat courseware prototype, the second objective is achieved.

3. *To evaluate the prototype multimedia courseware for English Literature in terms of effectiveness and usability*

The results of the pre-test and post-test calculation that were used to measure the effectiveness of BC-C have been discussed. According to the results, students who had used the BC-C application achieved higher scores than students who learned the Black Cat literature using conventional method. Independent T-Test was also performed to evaluate the hypotheses those have been created. Based on

the hypotheses, both groups showed no significant difference in pre-test. However, significant differences is observed in the post-test and increment scores. Therefore, this shows that the BC-C is effective in providing a better medium of learning the Black Cat story for UTP Foundation students.

The evaluation on the courseware usability using four evaluation criteria namely efficiency, learn ability, satisfaction and screen layout. The data were collected using the questionnaires distributed to the experimental group. The evaluations results show that among the four criteria, efficiency has been given the highest rank followed by learn ability, satisfaction and screen layout. Nevertheless, each factor showed a higher mean score than the median score. In addition, usability testing on multimedia elements has also been made and similar results were obtained where the mean score was higher than the median for all the multimedia elements. Thus the BC-C has fulfilled the usability needs, which has rendered the BC-C as suitable for full implementation. Hence, this research has met its third objective.

5.3 LIMITATION

This research is only limited to the case study in UTP. Only two groups of semester two of the Foundation were involved.

5.4 FUTURE WORK

The use of 2D animation in the prototype BC-C courseware makes it somewhat less interesting compared to other commercial softwares that has 3D animation. Therefore, in order to upgrade the courseware to be at par with other commercial softwares and to add more exciting features to the courseware, 3D cartoon animation is recommended.

A second feature that can be improved is the audio quality since this element receives the lowest mean score compared to the other multimedia elements in the courseware. In addition to those two features, upgrading of the screen-layout also can be considered in the future because this feature has the lowest mean score among the usability factors.

5.5 CONCLUSION

As a conclusion, the research on The Development and Usability of a Multimedia Black Cat Courseware using the Storytelling Approach has been successfully completed and the objectives have been met. Evaluation on the courseware was performed and the results show that it has been beneficial and effective to the students during the literature learning of the Black Cat and students were able to understand the Black Cat story better. Other benefit of the BC-C is that it has eased the lecturer's burden by reducing the time of teaching and learning session.

The BC-C is an interactive learning multimedia that gives many benefits of multimedia literacy. It is hoped that the BC-C Life Cycle, Conceptual Framework and the model of storytelling approach that have been designed will inspire other interested researchers in education and courseware area. It is also hoped that the concept of multimedia BC-C development which has incorporated the storytelling approach and some educational theories can be used for other pre university students to assist them in literature learning. Moreover, it is also hoped that this multimedia courseware can cultivate learning spirit in improving English language proficiency among the pre university students in Malaysia.