

## **CHAPTER 9**

### **CONCLUSION**

#### **9.0 Introduction**

A completion of a project does not mean a creation of a perfect and useful system. It may be perfect for the current time but not for the future. This is because the technology in ICT are always improving from time to time. In this chapter, project strength, limitation and enhancement are discussed.

#### **9.1 Project Strength**

The completion of this project has met the software requirement specification and the project objectives that have been discussed in Chapter 5 and Chapter 1. The system of this project is ready to be use for those people who want to learn C programming. The best potential for the system of this project is that the personal learning content can be accessed from anywhere that has a computer with LOOOP installed and Internet access. It enables the user to study anywhere and does not need to always bring along the book.

LOOOP not only can be used with the existing learning contents, a new learning content can be added inside the database as sharable learning content for future studies. The learning contents added are not limited to one subject. Users may use LOOOP with other learning contents that they wanted. The sources of sharable learning contents are either save from Internet or other registered users.

Information searching agent provides the user to search information from the web and save the information found. LOOOP provides the auditory learner, who studies well by

hearing, another resource in study where LOOOP provides as a reader agent for them. LOOOP, which can also perform certain multimedia files, gives visual and auditory learner a better environment to study.

## **9.2 Project Limitation**

There are a few limitations during LOOOP development. The main limitation is the using of COM component in the system. Some COM component functions well in one operating system, but cannot operate in another operating system. For example, the reader agent component can function on Microsoft Window 2000, but cannot function in a lower version of operating system. Besides, the client's machine is also needed to support COM component installation and execution.

Thus, lack of experience in COM component and DLL file programmings cause a short delay in the progress of the system implementation. LOOOP language that is use as data passing statement causes a limitation in this project. Some of the HTML code is confused when it is use together in LOOOP language. The code needs to be modified before merging in LOOOP language.

The other limitation for this project is the recorded learning contents are not transferable within online database and offline database. This will be a point that supports project enhancement in future. This limitation causes the learner not being able to retrieve the personal learning contents on online database when they are on offline mode and vice versa. They are limited to use the offline database if they have chosen to use offline mode. Internet searching also has limitation when some system environment conditions need to be met. The conditions are the computer must access to the Internet, the status of Google.com server is not down and the transfer bit within the server and the client's machine is moderate. Furthermore, the components or controls use in this project have limited

functions. More powerful components are needed to replace the existing components that are used in this project.

### **9.3 Project Enhancement**

Learning is a long process that never stops. At the same time, the technology in Information Technology has improved from time to time. With the integration of ICT and learning process, learning can be understood easily. This is similar to this project. When technology improves, Learning Objects can be more powerful and more usable in support learning. The system of this project that is developed based on Learning Objects approach has the space to enhancement. The identified project enhancements are as follows.

1. Includes a multi-language reader agent

With a multi-language reader agent, the system can read multi-language contents. The contents may contain only one type of language or in multi-language. Recently, the system can only read English text to the user.

2. Includes a multi-language dictionary or thesaurus

With a dictionary or thesaurus, learners can search word or phrase definition or descriptions direct from the system database. Recently, the word definitions and its descriptions are provided via Internet searching from Google.com.

3. Improves editing tools

Recently, there are just a few tools developed for text editing. More editing tools can develop to improve text editing.

4. Improves Internet searching

Recently, the results are retrieved from Google.com. Results from other Internet search engine may increase the numbers of results found. Besides, the results need

to be categorized and reviewed before list out to the user. This ensures the entire results list out is compatible with the term's search.

5. Improves highlight text tool

More and more highlight text shape need to be include in the system. This provides the user more selection in highlight text. Recently, the highlighted text is highlighted on the text background.

6. Improves the speed of data transfer bits by compressing the data

Recently, the data transfers from database to system and vice versa are not compressed. A large length of data caused a slow processing on data passing. With a data compression technology, the process can be done faster.

7. Learning contents are transferable within online database and offline database

This feature gives benefit to the users who have both register to online and offline accounts. The online learning contents can be added to or replaced by offline learning contents and vice versa. The users do not need to modify the same learning contents on the different system runtime modes.

## **9.4 Summary**

This concludes the last chapter for this project report. In this chapter, the project strengths, project limitations and project enhancements are discussed. Project strength is discussed about the benefit of LOOOP. Project limitations discuss some problems occurring due to the development and implementation. Project enhancements suggest some of the new features that support future upgrade for the system.