

## CHAPTER 7

### RESEARCH CONCLUSION

#### 7.1 Research findings

In recent years, how to perform the learning performance assessment is a critical issue in the web-based learning field. Yet, lecture-based training is only useful for certain types of students. In the last decade or so, there has been powerful attention in using non-lecture based teaching methods and classroom activities to improve student learning. Ubiquitous and mobile technologies provide opportunities for designing novel learning experiences that move out of the classroom. Information can be presented and interacted with in a variety of ways while exploring a physical environment. While such attributes may not be accessible to traditional ways, we can make use of reflective tools to monitor them and to promote deep learning. Encouraging reflective practices will assist students to get the most out of their group experiences as well as giving them tools for lifelong learning.

The main design goal was to facilitate a process to create user centric shared, collaborative and reflective learning spaces. There are a number of issues in reflective learning which need to be addressed here. However a challenge is not made here to provide a complete list, a number of important issues of apprehension highlighted by this study and through reviewing the literature on reflective learning, need to be addressed. These are:

- Clear reference to the epistemological basis;
- Developing a network of action, rather than focusing on single units;
- Approving a participatory approach and a long term perspective;
- Commitment to making overview from the course.

Reflective learning is enabled through a variety of means. The findings demonstrate the capacity of e-portfolio, learning journals, weblogs, concept mapping and multimedia techniques in facilitating reflective learning.

### **7.1.1 Documentary**

Substantial writing about events during lectures was due to students' awareness regarding the purpose and genre of the forum. Reflective writers include a perspective of themselves in the documentation of the week. However, reflective through the tools that mentioned have to transcend the function of a personal diary because of the public readership of the peers and other online users.

So even if though students may want to document the lecture events as notes for them to refer later, they should avoid from reporting lecture events in totality. Yet, it would be helpful to selectively write some parts to facilitate deeper reflection.

### **7.1.2 Commentary**

The students also focused on the discussions of highlighted issues of the week where they share their views and opinion.

### **7.1.3 Metacognition**

In this study, metacognition is recorded when participants think about their thinking thus questioning frames of mind. Metacognition is closely linked to critical reflection and its presence in students experience is found to expedite the inquiry learning process. Metacognitive reflection happens when students express their action plan or question overtly as they try to comprehend a concept. Furthermore, the students

acknowledge that electronically stored reflection enable easy retrieval of previous reflections. This facilitates continuous retrospection of past reflection which paves the way towards self-improvement.

#### **7.1.4 Information.**

Information in the forum achieves tow aims. Firstly to satisfy own curiosity and ignorance; secondly to share the new knowledge with other bloggers.

#### **7.1.5 Evaluation.**

The evaluative statement was made while participants reflected on their assignment progress.

### **7.2 Recommendation for future research**

Due to the limitations in conducting this study and also the discovery of a wealth of issues during the research process, more research would be welcomed to gather better understanding of this topic from multiple perspectives. As an initial recommendation, it has been proposed some areas by which this study can be expanded: exploring reflective learning among teachers, incorporating students in other disciplines, conducting quantitative and qualitative studies introducing variables in instructional design.

### **7.3 Concluding remarks**

This study was conducted to explore the achievability of using technology tools (e-portfolio, learning journal, weblog, concept mapping and multimedia techniques) to facilitate reflective learning among postgraduate students in Faculty of Computer Science and Information Technology, University of Malaya.

The results of this research could fully address the objectives aimed for this project. From the findings, it appears that the postgraduate students were at ease with that technology tools and able to reflect in a whole range of content of reflection. The reflection was wholesome encompassing the evaluation of the past, the understanding of the present and the anticipate of future. This could fully cover the first objective of this research work.

This study establishes the fact that the development of a professional identity goes beyond technical knowledge and skill alone. Introducing e-portfolio, learning journal, weblog, concept mapping and multimedia techniques enable students to reflect on abstract constructs such as professional values, attitude, thinking skills, beliefs, learning strategies which are valued outcomes for a reflective practitioner (Ghaye, 1998). This highlights the worth of e-portfolio, learning journal, weblog, concept mapping and multimedia techniques for reflective learning which addresses the second objective defined for this research. To design a suitable reflective learning method that suits the programs of study in Computer Science and Information Technology was the third objective of this study which has been completed. A web-based design was done in order to achieve the goal defined.

This study will act as an impetus and confidence factor for trainers in higher education institutes to introduce e-portfolio, learning journal, weblog, concept mapping and multimedia techniques in training of reflective practitioners. Instructional designers, educational leaders and educators should attempt reflective tools and custom-make the design and implementation according to the needs analysis of their setting. This area of study is a vast area which lots of studies can be carried out in further research studies. This method of learning can be studied in a way that it can be expanded in daily use in

teaching institutes. The reflection of different students based on different criteria such as intelligent quality, age, gender, nationality, etc. can be also evaluated in further research.