

CHAPTER 8

CONCLUSION

In the previous chapters, design principles for CSCL tasks are derived from three cycles of implementation. Important pedagogical issues are also discussed at the end of each cycle. Furthermore, the three roles that the eighteen pair members played are identified through the three cycles. Patterns of the participants' interaction and significant incidents are further elaborated. In this chapter, the focus will be on the third research question, as well as pedagogical implications and limitations of this study.

8.1 Summary of Findings

In the research process, the participants were observed to (1) resist conducting the speaking task, (2) have difficulty in doing problem-solving tasks, and (3) have difficulty in generating logical inferences for the final decision-making task. Therefore, important issues were discussed, including (1) The emphasis on accuracy in the participants' EFL learning context might have cost fluency development, (2) Learners' problem-solving performance might be affected by the CSCL program's consistency in presenting key clues, by the learners' familiarity of the grammar points or language uses in the CSCL program, by the learners' ability to discern trustworthy information, and by the learners' ability to synthesize all the information, and (3) The effect of written elements on the computer screen tended to be ignored on the CSCL program.

Besides, useful design principles were generated through three cycles of implementation, ranging from the use of authentic sound clips, the encouragement from an instructor, the reminder for the speaking task, the design of sentence pattern

clues and content clues, to the use of written elements.

Finally, the participants' interaction was identified as three roles: the expert, equal peers, and the supporter/monitor. The expert usually helped their partners comprehend the information and guided them in doing the speaking tasks. The equal peers were observed to generate well considered decisions in their explorative talk and less satisfying ones in their cumulative talk. The supporter/monitor usually gave reminders and prompts to the expert.

8.2 Pedagogical Implications

Through three cycles of implementation, pedagogical issues, design principles, and patterns of the participants' interaction are identified. Based on what I have done in the previous chapters, I will discuss pedagogical implications in the perspective of being a junior high school EFL teacher in Taiwan.

In the first cycle, the participants' resistance toward the speaking task led to the issue of traditional grammar translation teaching method. It was discussed that emphasizing too much on accuracy might result in lack of oral fluency. When witnessing the participants' strong resistances in the first cycle, I realized that when teachers spend most of their efforts on correcting learners' mistakes and drilling them to write and speak accurately, they do not know that it is at the expense of the learners' own voices to speak and write for themselves. It would be a pity if the education system put a huge investment in but the return was small in terms of training learners who still do not have confidence in expressing their own opinions in English. Therefore, it is suggested to provide the learners with more chances for fluency practice in the curriculum design.

Besides, the incidence of the researcher's help in assisting the participants to

overcome their resistance toward the speaking task brought up the issue of the need for an instructor in the CSCL program. It did not necessary infer that the program was not suitable for independent learning. On the contrary, the teacher can function as an action-researcher in the way that through repetitive observation, s/he is informed from learner's reactions as to what kind of assistance they need. Then the teacher integrates the assistance before the start of the program (warm-up), during the program (on the screen) and after conducting the program (in-class discussion). This point echoed with Levy (1997, p.198), who mentioned that when viewing a CSCL program as a tool in the curriculum, the teacher needed to take care of the task-setting and learner-training. Direct intervention during learners conducting the program might not be necessary. Instead, the teacher's role in a sense is to tune the program and to create the most explorative space for autonomous learning. The need for tuning the program implies that prescribed CSCL software does not guarantee free obstacles for individual learners. Only through iterative dialogue among the teacher, the CSCL program, and the learner could obtain an ideal learning experience.

In the second cycle, the obstacles that the participants encountered in the gunpowder experiment and the final decision-making task led to the issue of their problem-solving ability. It mentioned that the participants seemed to lack the ability to discern trustworthy information and the ability to correlate information. Under the traditional teaching method of grammar translation, learners only have to focus on four language skills. However, when conducting meaning-focus tasks, Ellis (2003, p.28) mentioned that learners are required to experience how language is used in communication. Thus, their problem-solving ability, especially for tasks such as detective missions in this study is therefore with significant importance. If learners are not well-prepared, they might produce an oversimplified reasoning process as how

some of the participants in this study did. For teachers, this fact implies that it is necessary to provide learners with some pre-task activities to warm them up. However, a more fundamental question to ask teachers ourselves is that whether the EFL teaching ignores the development of learners' higher cognitive abilities when we spend a large amount of time doing grammatical drills and paper-pen test in the class. If that is so, the participants' performance in this study provides a warning signal for teachers.

In the third cycle, the program design failed to facilitate the participants to make logical judgment on the last problem-solving task. Thus the issue of the de-centering of the written elements on the screen was discussed. This gives insight to the program designer that when learners interact with the CSCL program, they tend to ignore information presented in long passages. Thus, key clues and information are suggested to be presented in other kinds of modes or in multi-modes such as video and audio ones in order to attract learners' attention. Still, the behavior of reading passages is one of the important skills among the 4 language learning skills. It is unreasonable to avoid the learning objective of reading in the CSCL context. Therefore, how to balance learners' learning style and pedagogical goals would be an issue worth considering in the design of CSCL.

Finally, through three cycles of observation, the participants' interaction was identified as three roles: the expert, the equal peers, and the supporter/monitor. These roles imply the complexity of interaction taking place in front of the computer screen. For the teacher and the program designer, learners' interaction should be considered as one of the important factors that might affect learners' performances. And to prepare learners for a more desirable interaction process, such as the explorative talk between equal peers, the teacher might need to design extra activities before

introducing the CSCL program to learners.

8.3 Limitations of the Study and Suggestions for Further Research

Due to the need to derive the design principles for the computer-supported tasks, this study has specifically focused on the process of how the participants conducted the program. However, in the framework for the implementation of task-based instruction, two other phases, pre-task and post-task, were not mentioned in this study. In further research, two focuses could be further explored: how instructor prepares learners in the pre-task phase and how learners reflect their performances in the post-tasks phase.

The CSCL program in this study mainly presented elements in written modes. However, there are still other modes which might stimulate learners in different ways. Jewitt (2006) mentioned different modes could “provide different filters for understanding and offer different potentials for re-make a text” (p.76). Further studies with multi-modes of design could be carried out in order to obtain a more complete understanding of learners’ reactions toward the CSCL program.

Finally, during peer interaction, some tensions were observed to happen when the interaction pattern of expert-supporter changed to that of equal peers. For example, the student who used to be the expert in a pair tended to ignore opinions from the other student who had been the supporter. The reason might have to do with lack of awareness of the concept of explorative talk. Future studies are suggested to investigate this issue in depth. Also, the issues of L1 and private speech were not discussed further in this study. L1 was used frequently in the participants’ discussion, and private speech was used when the role of the expert rehearsed, summarized, and elicited grammatical items. Literature has shown that L1 functioned as a tool to

orientate the task and to solve lexical problems, and that private speech a tool to “gain control over our ability” (Lantolf, 2000). A more systematic analysis is required to better understand how mediation occurs through L1 and private speech.

8.4 Conclusion

In this present study, I have derived the design principles for a CSCL program through three cycles of implementation. The participants’ interaction was also observed for a better understanding of learning in computer-supported collaboration tasks. Through continuous cycles of enactment and redesign, it is known that the program design, the teacher’s support, and the learner’s interaction all decide the outcome of conducting the CSCL program. This study provides an example of exploring those complicated factors in the researcher’s teaching context. Design principles, pedagogical issues, and pairs’ interaction patterns generated from this study hope to provide some insights to those who are interested in the area of computer-supported collaborative task learning.