

CHAPTER V

SUMMARY, DISCUSSIONS, AND RECOMMENDATIONS

This chapter is organised into three major parts. The first part deals with the summary of the study which briefly describes the problem statement, research objectives, subjects, research design and instruments, the procedures of data collection and analysis, and findings of the study. The second part discusses the findings of the study, followed by the recommendations of the study.

5.1 Summary of the Study

5.1.1 Problem Statement

The literature and research findings on independent and autonomous learning, WBI, and English reading skill reveals that it is very promising that independent learning fostered by WBI can help improve English reading comprehension ability of Thai students whose proficiency levels are either high or low. Students also show positive attitudes towards learning in the technology-enhanced learning environment (Brett, 2000, and Zhang, 2002).

Since there is a degree of learner autonomy, students with different proficiency levels of English may require different degrees of independence in order to be successful in their language learning. Although there is a lot of research investigating effects of independent learning on student's learning achievement, much attention has been paid only on fostering the same degree of independent learning among students with different levels of proficiency. There is no research carried out to explore effects of different degrees of learner independence through WBI on English reading comprehension ability of Thai students. Therefore, it was the attempt of this study to classify degrees of learner independence in terms of support of the teacher and focus the investigation on the effect of different degrees of support for learner independence through WBI on English reading comprehension ability of Thai undergraduates; the effect of levels of English proficiency of Thai undergraduates on their English reading comprehension ability; and the interaction effect of degrees of support for learner independence through WBI and levels of English proficiency on English reading comprehension ability of Thai undergraduates.

The subjects from Dhurakit Pundit University (DPU) were selected for this study for the three main reasons. Firstly, no research on independent language learning was conducted before focusing on students at DPU. Secondly, it has been a strong intention of DPU to improve students' learning habits, i.e. to help them increase their motivation to learn English and become self-directed and responsible learners (Vongvipanond, 2004). Therefore, fostering learning independence was very promising to achieve the aim of DPU. Thirdly, to fulfil this goal of DPU, the Language Institute (LI) has had a policy to integrate computer technology into every English language course based on the rationale that computer technology promoted a learner-centred instruction, and it required all students to commit to their learning. In addition, computer-based instruction was an appropriate means to prepare students to enter the professional world of today and tomorrow, where people communicate electronically. Furthermore, very importantly computer-based instruction promoted independent and life-long learning, which is the concept of independent learning and in line with Goal 2 of the Thai National Educational Act.

5.1.2 Research Objectives

1. to compare the main effects of different degrees of support for learner independence, i.e. most support (MS), semi-support (SS), and least support (LS) through web-based instruction on English reading comprehension ability of the students, and their effect size.
2. to compare the main effects of different levels of students' general English proficiency, i.e. high and low proficiency levels on English reading comprehension of the students, and their effect size.
3. to study the interaction effect of degrees of support for learner independence and levels of students' general English proficiency on English reading comprehension ability of the students, and its effect size.
4. to investigate learners' attitudes towards learner independence through web-based instruction.

5.1.3 Population and Subjects of the Study

The population of the study was 841 students who were the high and low proficiency second year DPU students. Their proficiency level was judged by their GE 1 grade. The subjects of this study were therefore the second year undergraduate

students with high or low English proficiency, who were studying in different faculties and took the GE 2 course in the first semester of the academic year 2006 at DPU. However, it is noted that the English major students were excluded from this present study. Out of 841 as the total student population for the study, 108 students (54 high and 54 low proficiency ones) were the subjects of the study. They were selected by the *two-stage random sampling* technique -- a combination of cluster sampling and individual random sampling (Fraenkel and Wallen, 2000). Firstly, the three clusters or faculties were randomly selected and they were Accountancy, Communication Arts, and Business Administration. After that, the individual random sampling was employed to select only 18 high and 18 low English proficiency students in each cluster by drawing from their student identification numbers. Therefore, 36 students from each cluster were randomly selected, which made the total subjects of 108 for the study. These three groups were later randomly assigned to each experimental group.

The results of the subject random selection and random assignment to the experimental groups were as follows (Table 5.1).

Table 5.1: Random Selection and Random Assignment of the Subjects

Group	Random Selection	Random Assignment
1	Accountancy students	Most support for independence (MS)
2	Communication Arts students	Semi-support for independence (SS)
3	Business Administration students	Least support for Independence (LS)

The subject compatibility of these three groups was confirmed by the appropriate statistical tests.

5.1.4 Research Design

In regard to the research design, this present study was the experimental research which aimed to study the main and interaction effects of the two categorical independent variables or 'factors', i.e. degrees of support for learner independence with three levels: MS, SS, and LS; and general English proficiency levels of the students with two levels: high and low on the continuous dependent variable, i.e.

general English reading comprehension ability. These two factors had 3 and 2 levels; and each cell contained equal subjects of 18. Therefore, this study was the 3x2 *factorial design* with 6 experimental groups, i.e. MS with high proficiency (group 1), SS with high proficiency (group 2), LS with high proficiency (group 3), MS with low proficiency (group 4), SS with low proficiency (group 5), and LS with low proficiency (group 6). Table 5.2 illustrates the research design of this present study.

Table 5.2: Research Design

Levels of students' proficiency	Degrees of support for learner independence		
	Most support for learner independence (MS) <i>X1</i>	Semi-support for learner independence (SS) <i>X2</i>	Least support for learner independence (LS) <i>X3</i>
High proficiency <i>Y1</i>	18	18	18
Low proficiency <i>Y2</i>	18	18	18

5.1.5 Research Instruments

There were two main research instruments employed to collect the quantitative data, which were the general English reading comprehension test and the questionnaire.

1. The General English Reading Comprehension Test

The test utilised to collect the quantitative data was the English reading comprehension test constructed by the researcher/author. The test consisted of 40 multiple choice type items with the content validity of 0.97 based on the calculation of the Index of Item-Objective Congruence (IOC) of each test item. The reliability of the overall test found by using the reliability coefficient (Kuder-Richardson 20 formula or KR20) was 0.77, the difficulty index was 0.40, and the discrimination index was 0.36. Also, the item validity index of the test (Point-Biserial correlation coefficient) on average was 0.29.

2. The Questionnaire

The questionnaire of the Likert Scale type was developed to investigate learners' attitude towards learner independence and other factors relevant to the learner independence through web-based instruction. The questionnaire was validated and its content validity was 0.80 from the calculation of the Index of Item-Objective Congruence (IOC) of each questionnaire statement. Moreover, it was found that the reliability of the questionnaire based on the Cronbach's alpha coefficient was 0.84.

Besides the test and questionnaire, the Reading Strategy Checklist was applied to collect the quantitative data as a triangulation with the questionnaire.

In addition, the study employed other research instruments which were also used as the pedagogical tools to collect the qualitative data as follows: learner contract, learning record sheet, counselling form for the teacher, and teacher's feedback. These instruments were used to gain the information to support the quantitative findings and to be used for the data discussion.

5.1.6 Data Collection Procedures

This study employed the mixed methods approach. Therefore, for the quantitative data collection procedures, the pre-test of the general English reading comprehension test was administered by the researcher/author during the first session of the second week of the GE 2 course to all subjects in each research group in class. The reading post-test which was the same form of the pre-test was administered to all students in week 14.

The pre-questionnaire was administered by the researcher/author in class in week 4 after the completion of the learning training programme while the post-questionnaire was administered at the same time of the post-test, i.e. in week 14.

In regard to the qualitative data collection, the procedure started from week 5 to week 14 from the learner contracts, learning record sheets, teacher's feedback and counselling forms for the teacher.

5.1.7 Data Analysis

The main quantitative data analysis was executed from the two research instruments, i.e. the general English reading comprehension proficiency test and the questionnaire.

For the first three research questions, the statistical test used for the data analysis was a two-way Analysis of Variance or Two-Way ANOVA. The key statistic in ANOVA was the F-test of difference of group means. Also, the effect size was calculated. The Statistical Package for the Social Sciences on Personal Computer (SPSS/PC), Version 11.5 was applied for the data analysis.

For the fourth and fifth research questions, mean scores and standard deviation (SD) of each domain of the post-questionnaire of each group were calculated. Then, mean scores and SD of every domain of each group were computed to compare whether they were significantly increased. The *Dependent-Samples t-test* was used to test the fourth hypothesis. To test the fifth hypothesis, the *One-Sample t-test* was utilised.

In regard to the qualitative data analysis to support the questionnaire findings, the information gained from the 9 subjects of each group randomly selected was used for this purpose. Using content analysis, the information from the learner contracts, learning record sheet, counselling forms for the teacher, and the teacher's feedback was categorised based on the key concepts, and frequently counted to support and provide insights for the quantitative findings and data discussion.

5.1.8 Findings

The findings in relation to the four research objectives were as follows. It should be noted that under the fourth research objective there were two research questions.

1. There was no significant difference among English reading comprehension ability of undergraduate learners learning through different degrees of support for learner independence by web-based instruction. This means that the three different degrees of support for learner independence: MS, SS, and LS enhanced through web-based instruction had some effects on learners' general English reading comprehension ability; but their effects were more or less the same. The Eta squared

effect size was 0.01 meaning that the factor (degrees of support for learner independence) by itself accounted for 1% of the total variability in the dependent variable (English reading comprehension ability). Its magnitude is 'small'. The observed power was 0.27 meaning that if the study were to be replicated 100 times, the null hypothesis would be correctly rejected on 27% of those replications.

2. There was a significant difference among English reading comprehension ability of undergraduate learners with high and low levels of general English proficiency learning through different degrees of support for learner independence by web-based instruction. This means that the different levels of learners' general English proficiency have different effects on their English reading comprehension ability after learning it through web-based instruction. The Eta squared is 0.38 meaning that the levels of English proficiency by itself accounted for 38% of the total variability in the English reading comprehension ability. Its magnitude is 'huge' according to Cohen's *d* scale of magnitudes of a correlation. The observed power of the main effect is 1.00 meaning that on 100% of the replications of this study the null hypothesis will be correctly rejected.

3. There was no interaction effect between the two independent variables: three degrees of support for learner independence and levels of English proficiency on the English reading comprehension ability of the learners. This indicates that different degrees of support for learner independence through web-based instruction and levels of students' proficiency do not have an effect on the English reading comprehension ability of students.

4.1(1) For the high proficiency MS group, on average the attitudes towards learner independence enhanced by WBI of the students after the learner training and at the end of the course were significantly different ($\alpha = 0.05$). This means that on average the attitudes towards learner independence of the students in this group significantly increased at the end of the course.

4.1(2) For the high proficiency SS group, on average their attitudes towards learner independence at the end of the course were significantly different in a reverse direction, i.e. decreased ($\alpha = 0.05$). This indicates that on average, the SS learners' attitudes towards learner independence significantly decreased after the treatment.

4.1(3) For the high proficiency LS group, on average their attitudes towards learner independence after the learner training and at the end of the course were not significantly different ($\alpha = 0.05$). This means that they hold more or less the same

attitudes towards learner independence after the learner training and at the end of the course.

4.1(4) For every low proficiency group, the findings were the same that on average their attitudes towards learner independence fostered through WBI after the learner training and at the end of the course were not significantly different ($\alpha = 0.05$). This means that on average the attitudes towards learner independence of the students in these three groups before and after they performed the independent learning on the English reading comprehension skills through WBI or the EDO were more or less the same.

4.2(1) Overall, there was a statistically significant difference at the test value of 3.50 in learners' attitudes towards learner independence after the treatment from the MS and LS groups ($\alpha = 0.05$). The hypothesis was accepted for these two groups. This means that their attitudes towards learner independence were higher than 3.50, which suggests that at the end of the course they had highly positive attitudes towards learner independence.

4.2(2) For the SS group, there was no statistically significant difference at the test value of 3.50 in terms of students' attitudes towards learner independence at the end of the course. The hypothesis was therefore rejected. This means that their attitudes towards learner independence were at the moderate level at the end of the course.

4.2(3) For the MS, SS, and LS groups, there was no statistically significant difference at the test value of 3.50 in terms of students' attitudes towards learner independence at the end of the course. This means that their attitudes towards learner independence were at the moderate level.

For readers' convenience, the findings of the research questions 4.1 and 4.2 in relation to the research objective 4 are summarised in the tabular form (Table 5.3).

Table 5.3: Findings of the Research Questions 4.1 and 4.2

Proficiency Level	Group	Findings		
		Significantly increased / (higher than 3.50)	Not significantly increased, but in reverse direction	Not significantly increased / (not higher than 3.50)
High	MS	x (xx)		
	SS		x	(xx)
	LS	(xx)		x
Low	MS			x (xx)
	SS			x (xx)
	LS			x (xx)

x for Question 4.1

(xx) for Question 4.2

5.2 Discussions of the Findings

Discussions of the findings will be done in relation to the four research objectives.

5.2.1 The Effects of Three Degrees of Support for Learner Independence on the English Reading Comprehension Ability and the Effect Size

Based on the finding from the two-way ANOVA, score of $F = 1.29$, $df = 2$, which was not statistically significant ($p > 0.05$). The Eta squared was 0.01 and its magnitude is 'small'. This revealed that the three degrees of support for learner independence, namely MS, SS and LS did not have different effects on the student's English reading comprehension ability.

The question is: Why did the three degrees of support for learner independence have more or less the same effect on the English comprehension ability of the students?

This might be due to the following reasons:

1. Learner Training

The learner training programme was given to students in each group with the main aim to train them to become independent learners (Holec, 1981). Students received the same learner training for the same duration of time. It can be said that there was no treatment bias in terms of learner training given to students in each group. The theoretical concept of learner training based on the points of view of Ellis and Sinclair (1989) and Tudor (1996) is to help learners become more effective

English learners by helping them understand more of learning and acquire skills and knowledge that are necessary to perform their independent learning as per their learning goal. Learner training is the way to help learners take more responsibility for their own learning.

In this study, based on the justification that learner training is the promising prerequisite for the independent learning mode, students of every group were given both psychological and methodological preparations as for the learner training that aimed to help them become independent learners taking responsibility for their reading learning on the Web independently outside class. Furthermore, students received the extensive training with the focus on the methodological or practical preparation or reading strategies of both cognitive and metacognitive ones while they were undertaking the independent learning through the Web. Therefore, it can be said that students received the on-going learner training, which could continuously raise their learning strategy awareness. As Dickinson (1995) points out, methodological preparation helps learners develop and/or become conscious of cognitive and metacognitive strategies, which could help them acquire the abilities and techniques necessary for their independent learning.

Moreover, outside class students in any assigned degrees of support for learner independence undertook the independent learning on the Web on the same basis. They all used the same pedagogical tools, i.e. learner contract, learning record sheet, and learning strategy checklist to support their independent learning. Learner contract provided students with a framework for their learning planning and attempted to motivate them to commit to their learning seriously (Dickinson, 1987; Gardner and Miller, 1999). The learning record sheet helped students be aware of their learning and reflect on their problems and progress. The reading strategy checklist made students aware of the strategies they used and should use.

What can be concluded from the first reason is that students in each degree of support for learner independence received the same learner training, which is the essential foundation to become independent learners, and performed the independent learning in every same dimension. Therefore, it may not be surprising to find that different degrees of learner independence did not have different effects on students' reading comprehension ability.

The evidence to support this interpretation can be obtained from the qualitative data -- the learning record sheet (Tables 4.14- 4.19 in Appendix N). Item 5

asked students to rate their thinking on this way of learning and it was found that the three high proficiency groups thought that this mode of learning was useful with the means higher than 4 out of 5 in both phases. This reflects that the high proficiency student held their opinion on the usefulness of this mode of learning throughout the semester and the main reason was due to the benefits of the independent learning that enabled them to practise reading skills by themselves. By doing so, they could monitor their learning progress and ability and know how to improve themselves.

Likewise, the three low proficiency groups also viewed this mode of learning as useful with the mean scores of both phases higher than 4 out of 5. The reason is the same as from the high proficiency groups, i.e. the advantages of the independent learning that helped them in terms of practice, problem-solving, and learning improvement. Students of both levels of proficiency did realise the essence of independent learning and appeared to perform it in the same direction. Obviously, the impact of the independent learning is on the students' attitudes towards its usefulness that helped them improve their learning and reading ability. This may explain why the first hypothesis was rejected.

2. Fields of Study

Since this study employed the cluster random sampling technique in order to obtain the three faculties which would be the representatives of the population composing of nine faculties, the subjects were therefore from different faculties or fields of study. The different fields of study of the three groups, which are accountancy for the MS, communication arts for the SS, and business administration for the LS group may explain the reason of the finding. Basically, the present study only took into account the English proficiency of these students but did not focus on the stereotype of the students in each field of study. Therefore, fields of study may be the factor that affected the finding.

Accountancy mainly deals with figures and it is very likely that students do not use English much for their work. For communication arts, the evidence can be drawn from the counselling finding that some students mentioned that they did not enjoy much independent learning through the Web since they did not like English; therefore, independent learning did not mean anything to them. They also mentioned that usually communication arts students did not like English. However, they performed the independent learning due to the teacher/researcher, who was kind and

delivered good teaching. Being aware that the teacher/researcher was trying to help them improve their English, they were trying to perform independent learning to please the teacher and give something in return. Besides reflecting the claimed nature of the communication arts students, this finding reveals the role of teacher and supports one of the six practical ways for the teacher to enhance greater learner independence as pointed out by Dickinson (1992), i.e. the teacher can make independent learning legitimised by showing learners that it is approved by the teacher and by encouraging them to be more independent.

In regard to the LS students who are in the field of business administration and some of them study international business, it is quite clear that English seems to be important to them in their future career. This can be supported by the finding on the usefulness of this mode of learning from the learning record sheets. The LS students of both high and low proficiency levels viewed it as the most useful, followed by the MS and SS groups. In addition, the findings from the learner contracts show that the LS students of both proficiency levels spent the most time on their independent learning, followed by the MS and SS students. This well reflects the enthusiasm of the LS students to perform independent learning although without any support in terms of feedback and counselling from the teacher/researcher. The finding is supportive of the finding from Lee's (1998) study that the more enthusiastic learners had a positive view about the independent learning programme. The finding also appears to support the view made by Crabbe (1993) that success in language learning can be achieved by the opportunities provided for learners inside and outside the classroom; however, the learners make use of those opportunities by themselves.

What can be concluded from the second reason based on the possible stereotypes of students in different fields of study is that nature of the students and their academic fields could have effects on students' enthusiasm to take responsibility for their own independent learning.

3. Time Factor

An additional factor that may explain why there were more or less the same effects of the three degrees of support for learner independence on students' English reading comprehension ability is the time factor. As pointed out by Little (1995), in any case the time constraints usually are a key factor in shaping every programme of language teaching, which tends to strictly limit direct learner training. The students in

this present study were exposed to only 12 hours learner training in class – 7.30 hours for the intensive training and 4.30 hours for the extensive training. Besides that, students exercised independent learning through the Web outside class for only 9-10 weeks. The time used to foster learner independence in this present study is obviously too short for the students to demonstrate significant gains in their general English reading comprehension ability, which was measured by the proficiency English reading test. Compared to the achievement test, which is also used to measure students' learning achievement in formal educational context, the proficiency test is of higher level of difficulty. The time factor issue in relation to the treatment is also pointed out by Cohen et al. (1998: 150) undertaking the experimental study where they acknowledge that '...the seven-week span for the treatment between pre- and post-testing was not really long enough for there to emerge truly substantive results'.

The empirical data on the length of learning strategy instruction or learner training can be obtained from the studies carried out by Chamot, Barnhardt, et al., 1993; Chamot, Robbins et al., 1993). These two studies covered three years for the strategy instruction in order to investigate students' learning accomplishments.

The time factor could also be the reason why feedback and counselling the MS and SS groups received from the teacher/researcher seemed not to help them develop a sufficient set of values, ideas, and techniques in their language learning (Gremmo and Riley, 1995), which was expected to have some positive effect on their reading ability. In fact, based on the data on the usefulness of the teacher's feedback, students in both groups reported that it was useful. What could be explained is that students in these two groups received the feedback and counselling for a short period of time, i.e. only a number of times in 10 weeks. Besides that, their past independent learning experience appears not to build a firm ground for their capacity to be independent learners. The data from the counselling show that students of both levels of proficiency in these two groups mentioned about their unfavourable past independent learning experience which seemed to be teacher-directed and gave no learning benefits to them (see Tables 4.26 and 4.27). Although students reported that they changed their attitudes towards independent learning because of the new independent learning experience they were exposed to this semester, the period of transition from the teacher-dependence to self-dependence seems not to be sufficiently long for successful language attainment.

4. Sample Size

The last possible reason relates to the sample size appropriate for the inferential statistics. This present study employed only 108 subjects, resulting in only 18 in each cell or treatment group indicating that the sample size is very small. Walsh (1990) suggests that the sample of 30 or more is considered as 'large' for populations that are normally distributed. With the small sample size of this present study, it may be difficult to find significant differences.

Due to the inexistence of the significantly different effects of the three degrees of support for learner independence on the English reading comprehension ability, the effect size is not discussed. However, it is still worthwhile exploring the mean scores of each group of students to see if there is any noticeable learning achievement among the subjects in the three groups. Table 5.4 shows the mean scores of the pre- and post-test of each group of students. The total score is 40.

Table 5.4: Means Scores of the Pre- and Post-Test of Students of Each Group

Levels of English proficiency	Degrees of support for learner independence											
	Most support (MS)				Semi-support (SS)				Least support (LS)			
	Pre-test (n = 18)		Post-test (n = 18)		Pre-test (n = 18)		Post-test (n = 18)		Pre-test (n = 18)		Post-test (n = 18)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
High	19.28	2.80	19.83	2.96	19.06	2.96	22.28	3.63	19.22	3.89	19.89	3.51
Low	11.33	3.25	15.28	2.97	11.44	2.33	15.28	3.95	11.56	1.65	16.06	2.49

The descriptive statistical analysis of the reading comprehension test scores (pre-test and post-test) of the students in the three high level groups indicates that there was little gain in the post-test compared to the pre-test according to the mean scores (MS = 19.83 vs. 19.28, SS = 22.28 vs. 19.06, and LS = 19.89 vs. 19.22). The pre-test scores had already suggested that the three groups of the high proficiency level students were more or less the same in terms of their English proficiency at the beginning of the treatment (see Table 3.2). It can be concluded that on average after the treatment the reading comprehension ability of the high proficiency students was

still more or less the same. In other words, it is confirmed that the degrees of support for learner independence fostered through WBI did not have the significantly different effects on the English reading comprehension ability of the high proficiency students. This seems to be normal for the case of the high proficiency students, which can be supported by the findings of the study conducted by Jerdan (1993) showing that the high proficiency students consistently performed well on the tests, showed higher task orientation, higher attention level, and more self-directed effort. Their cognitive processing skills were also high. This clearly suggests that it may be difficult for the high proficiency students to obtain significant learning improvement.

By contrast, the same Table shows that the low proficiency groups improved their reading comprehension ability from the pre- to post-test based on the mean scores (MS = 11.33 vs. 15.28, SS = 11.44 vs.15.28, and LS = 11.56 vs.16.06). These results indicate that the low proficiency students seem to benefit more than the high proficiency students from exposure to different degrees of support for learner independence enhanced by WBI to improve their English reading comprehension ability. Again, the limited sample size could be the reason why there was no significant effect of different degrees of support for learner independence on the English reading comprehension ability. The finding of this present study appears to support the point made by Dickinson (1992) that learner training aims at making every learner in particular the less effective learners become better learners and more capable of independent learning.

However, the finding of this study does not agree with the finding of the study conducted by Halbach (2000) who suggests that the better students seem to benefit most from learner-training. The difference of the two findings may lie in the difference of the learner training implementations. In Halbach's study, students were helped to develop their metacognitive strategies by having them make use of their opportunities to practise and learn English, and what they considered important for their learning. The supporting tool was the diary that students were asked to keep the records of their own learning for handing in at the end of the course. The teacher did not have access to the diaries during the course. It may be possible to say that students were just told to practise to be independent learners. They seemed not to receive any preparations – either psychological or methodological one. This may explain why 'over half of them did not hand in a diary'; and 'students 1 writes at the end of her diary: "The most interesting thing I have got from this course is that I have

learnt how to solve that problems that make my English being not as good as it should be”’. It is therefore not surprising to perceive that the learner or strategy training may not be appropriate for the weak students, according to Halbach’s study. The weak students should not be in a position to enjoy the complete learner independence without any kinds of preparations.

In short, as Table 5.4 shows it seems that students’ reading comprehension ability is in the predicted positive direction, especially among the low proficiency students. This suggests that with more practice on the independent learning mode through the WBI, students may be able to demonstrate significant achievement in their reading comprehension ability. This interpretation can be supported by the view of Little (1995: 177) that ‘... It seems likely that continuous process of making learners aware of strategic possibilities is a safer bet in terms of both feasibility and likely effectiveness. ...’. Again, the time factor is pivotal to be taken into consideration for the learner training programme to foster learner independence. However, it is critically noted that this interpretation needs to be cautiously treated since there was no control group which received no exposure to learning strategy training at all, and thus it may be difficult to make conclusive claims about the effects of reading strategy training.

5.2.2 The Effects of Levels of English Proficiency of the Students on the English Reading Comprehension Ability and the Effect Size

With reference to research objective and research question 2 aiming to investigate the effects of the second independent variable, i.e. the levels of English proficiency of the students, Table 5.4 above already shows that there is the main effect of this variable on the English reading comprehension ability, meaning that the different levels of students’ general English proficiency had different effects on their English reading comprehension ability. It is clear from the mean scores of the high and low proficiency students that the high proficiency students outperformed the low ones in terms of their reading comprehension ability. The mean scores of the pre-test of the high MS, SS, and LS groups were 19.28, 19.06, and 19.22 respectively, while the pre-test mean scores of the low proficiency students were 11.33, 11.44, and 11.56 respectively. The post-test mean scores also confirm this finding. Although the post-test mean scores of the low proficiency groups (MS = 15.28, SS = 15.28, and LS = 16.06) increased from their pre-test mean scores, they were not at the same or similar

level of those of the high proficiency groups ($MS = 19.83$, $SS = 22.28$, and $LS = 19.89$).

The measures of effect size in ANOVA are measures of degree of association between an effect such as a main effect or an interaction and the dependent variable. They can be thought of as the correlation between an effect and the dependent variable. The Eta squared was 0.38 and its magnitude on the dependent variable or English reading comprehension ability is considered as 'huge' as per the scale of magnitudes of a correlation suggested by Cohen (1988). The observed power of the main effect is 1.00. Therefore, the question is: Why did different levels of English proficiency of the students have a significant and huge effect on their reading comprehension ability? This might be due to the following reasons:

1. Characteristics of Good Language Learners

The first reason may be due to the characteristics of the good language learners (Naiman et al., 1978 cited in Rubin, 1987) whose proficiency is high compared to the low proficiency students. As Jerdan (1993) asserts, the high proficiency students exhibit higher cognitive levels, and more attentive and more self-directed effort than the low proficiency students. This is supported by the findings of this present study on the number of hours students spent for their own independent learning. The high proficiency students in the three groups spent more learning hours than their low proficiency peers in the same treatment groups (see Tables 4.12.1 and 4.12.2). It can be said that the high proficiency students were more attentive and enthusiastic than the low proficiency ones.

2. Use of Learning Strategies

Besides that, in terms of learning strategy use, substantial research reveals that good language learners or high proficiency students have a wider range of strategies and use them more frequently than the low proficiency students, for instance Abraham and Vann, 1987; Chamot, 1987; Gan, 2004; O'Malley and Chamot, 1990; Ratchadawisitdul, 1986; Rubin, 1987; Wimolkasem, 2001. The findings of this present study appear to support these research findings. The three high proficiency groups employed more strategies than the low proficiency students (see Tables 4.20 – 4.25).

3. Theoretical Foundation of Learner Strategy Training

An additional explanation is related to a theoretical foundation of learning strategy training, which explored learning strategies that good language learners used and exploited these strategies to teach poor language learners to help their learning efficiency. This clearly reflects that the high proficiency students or good language learners have developed their capacity for language learning attainment. As Cohen et al. (1998: 144) assert, ‘... even without extensive strategy instruction, some resourceful learners can and do utilise strategies effectively – whether as a result of their own insights about language learning, as result of suggestions provided to them by their teachers or peers, or as a result of insights provided in the textbooks’.

After all, the levels of proficiency as the vital factor on language learning achievement do not have the effect only on the English reading comprehension ability, but in other learning areas. The finding therefore appears to corroborate the results of other studies (Chollatarn, 1987; Homchan, 1999; Jerdan, 1991; Ratchadawisitdul, 1986; Rossuk, 1985; Sukamolson, 1998; 1998-1999; Wimolkasem, 2001). Such results suggest that the high proficiency students outperform the low proficiency ones no matter in what learning approaches they learn, and in terms of more frequent use and possession of wider range of strategies (Chamot, 1987; Gan, 2004; Halbach, 2000; O’Malley and Chamot, 1990; Oxford, 1994).

5.2.3 The Interaction Effect of Degrees of Support for Learner Independence and Levels of English Proficiency of the Students on the English Reading Comprehension Ability and the Effect Size

There was no interaction effect of the different degrees of support for learner independence and the students’ English proficiency levels on the English reading comprehension ability of the students. However, it is worthwhile exploring the reasons **why there was no significant interaction between the two dimensions when there was a significant difference in terms of levels of general English proficiency on the reading comprehension ability.**

The reasons might be due to the fact that the different degrees of support for learner independence did not have significant effects on the reading comprehension ability due to the reasons discussed earlier. Considering the effect size which is ‘small, it is therefore clear that there was no tendency to see the significant effects of

this factor on the dependent variable or English reading comprehension ability of the learners. The degrees of support for learner independence are considered crucial as the first independent variable in this study with the aim to investigate its effects on the dependent variable, while the second independent variable, i.e. the levels of proficiency is the moderator variable. It is not uncommon to see the effect of the moderator variable. The interaction effect was therefore unlikely to occur since the first independent variable did not have significant effects on the dependent variable although the second independent variable had significant effects on the dependent variable.

5.2.4 The Investigation of Learners' Attitudes towards Learner Independence through Web-based Instruction (WBI)

The findings suggest that the attitudes towards learner independence of the high MS group significantly increased at the end of the course, while those of the high SS group decreased. The high LS groups remained the same in their attitudes. However, the MS and LS groups had highly positive attitudes towards learner independence while the SS group hold their attitudes at the moderate level.

The three low proficiency groups did not show significant increase in terms of their attitudes towards learner independence, and their attitudes were at the moderate levels at the end of the course.

Before discussing the findings, it is worthwhile statistically testing the students' attitudes towards learner independence after the intensive learner training which was in week 4 in order to see whether students in each level hold the same or different attitudes. Tables 5.5 and 5.6 present the results of the data analysis conducted by employing the One-Way ANOVA test.

Table 5.5: The Differences among the Pre-Questionnaire Mean Scores of the Three High Proficiency Groups

Source of Variance	Sum of Squares	df	Mean Square	F
Between Groups	.062	2	.031	.419
Within Groups	3.774	51	.074	
Total	3.836	53		

Table 5.5 shows that $0.05 F_{2, 51} > 0.419$, and $p = 0.660$. Therefore, the attitudes towards learner independence after the intensive learner training of the three high proficiency groups were not significantly different ($\alpha = 0.05$). This means that, on average, their attitudes were more or less the same from the beginning or after they received the learner training.

Table 5.6: The Differences among the Pre-Questionnaire Mean Scores of the Three Low Proficiency Groups

Source of Variance	Sum of Squares	df	Mean Square	F
Between Groups	.280	2	.140	2.756
Within Groups	2.589	51	.051	
Total	2.868	53		

For the low proficiency groups, Table 5.6 shows that $0.05 F_{2, 51} > 2.756$, and $p = 0.073$. Likewise the high proficiency groups, on average, the attitudes towards learner independence of the three low proficiency groups were not significantly different ($\alpha = 0.05$). This indicates that the low proficiency students, averagely, had the same attitudes towards learner independence

The findings from Tables 5.5 and 5.6 suggest that the learner training conducted to every group more or less had the same influence on the students of both high and low proficiency. It probably deconditioned any false perceptions the students may have had about independent learning after the learner training.

The findings from the post-questionnaire show that the high MS and LS students held their attitudes towards learner independence at the high level while the high SS group at the moderate level, and the attitudes towards learner independence of the three groups of the low proficiency students had not at the high level at the end of the course. The hypothesis was therefore rejected and the question is: Why did students' positive attitudes towards learner independence not increase to the high level at the end of the course?

The possible reasons might be the following.

1. Change of Attitudes as a Gradual Process

Autonomy is considered as a continuum and a change of attitudes requires gradual development over time (Dickinson, 1995). The time span to foster learner independence by having students exercise their independent learning through the Web in this study was only 9-10 weeks, which may be too short to result in any dramatic change of students' attitudes towards learner independence. Therefore, the findings of this study, in particular those from the low proficiency students who maintained their attitudes towards learner independence at the moderate level both after the learner training and at the end of the course are consistent with the discussion in the literature that the development of independence is a slow process. The findings appear to corroborate the results of Lee's (1998) study, but disagree with the finding of the research undertaken by Lin (1996). The questionnaire findings showed that almost all of the students in Lin's study had very positive attitudes towards strategy training that aimed to help them develop learner independence. The different findings may be due to the duration of the learner training, which was one semester for this present study, but three semesters for Lin's study. Again, the time factor seems to play the vital role on the development of positive attitudes towards learner independence. In addition, the finding from Lin's study supports the argument made earlier that the change of attitudes towards learner independence is a gradual process.

2. Personal Attributes of Learners

An additional reason that might help explain the findings is related to the students' personal attributes. In this study, enthusiasm clearly shows the characteristic of students. Based on the learning hours spent on the independent learning, the high MS (157 hours) and LS (188 hours) groups spent much more hours than the high SS group (96 hours). The low proficiency groups spent fewer hours than the high proficiency groups. The low MS spent 120 hours; the SS 77 hours; and the LS 137 hours. The conclusion can be drawn that the more enthusiastic students are likely to have a more positive attitude towards learner independence, which is supportive of Lee's (1998) interpretation of the similar findings. In addition, the findings on the enthusiasm of students seem to indicate that the high proficiency students tend to be more capable of being independent learners than the low proficiency students. The findings agree with what Soinam (1999) found out.

3. Time of Questionnaire Administration

The timing of the pre-questionnaire administration may explain why students' attitudes towards learner independence at the end of the course were not at the high level. The pre-questionnaire was administered right after the intensive learner training, i.e. in week 4. The reason why the pre-questionnaire was not administered before the learner training was that students should know what independent learning was before they rated the questionnaire. With no exposure to independent learning experience, students would not be able to rate the questionnaire effectively. Therefore, the pre-questionnaire administration after the intensive learner training may decondition any false perceptions about independent learning of the students. It may be possible that students still hold similar attitudes towards independence ten weeks later when the post-questionnaire was administered at the end of the course.

5.2.5 The Effects of Learner Training on Learners' Attitudes and Strategy Use

Drawing on the quantitative and qualitative findings, further discussions will be done on how learner training affected learners' attitudes and strategy use. The framework of psychological and methodological preparation (see Figure 2.3) will be utilised for the discussions. There are five areas in such framework, i.e. changing attitudes, developing confidence, developing self-esteem, cognitive and metacognitive strategies.

1. Changing Attitudes

The questionnaire findings indicate that students in every group had highly positive attitudes towards independent learning except the L/SS group which held moderately positive attitudes. Looking into some particular items from the questionnaire, strikingly every group reported that learning was their own responsibility (Item 1), and that they believed that learning success resulted from their effort (Item 7). These two items were rated greater than 4.80 out of 5.00 for the high proficiency groups, which clearly reflects their positive attitudes towards independent learning. In addition, the finding from the questionnaire item 11 reveals that students in both proficiency groups were highly pleased to take responsibility for their own learning, and willing to evaluate their learning whether it was good (Item 12). This obviously shows that students believed in the desirability of independent learning (Dickinson, 1995).

The possible reasons that might explain this are as follows.

First, the benefits of independent learning are legitimate reasons. Drawing on what students in every group said about the usefulness of this mode of learning in the learning record sheet, it is clear that they all accepted that independent learning was legitimate (Dickinson, 1995) and it helped them improve their language learning. The benefits of independent learning were reported in many aspects.

Freedom to learn

'I use my thought and everything is totally a freedom' (H/SS).

'I practised how to learn by myself' (L/SS).

Learning monitoring and evaluation

'I know my ability level, and I can improve accordingly' (H/MS).

Learning improvement

'It helps me improve my reading skills' (H/SS).

'It helps improve our reading skills a lot (if diligent and attentive)' (L/MS).

Self-dependence

'It's a practice of self-dependence and exertion' (H/LS).

'Very good indeed. I think it's a learning of new things and makes us practise more by ourselves such as vocabulary, sentences, and expressions' (L/SS).

Affective factors

'I can learn by myself, making me more active and try harder' (L/LS).

'It helps me love to learn English' (H/LS).

It is clearly noted that students understood the nature and values of independent learning that helped them in terms of learning achievement. This calls for psychological preparation to make students see that independent learning is legitimate before they are let to perform independent learning by themselves. This study designed activities 1 (Unfreezing) and 2 (Describing independent learning) in lesson 1 for these purposes.

Benefits of independent learning through the web are strongly supported by the findings from the counselling sessions on students' past independent learning experience. Students in the MS and SS groups revealed that they did not gain any benefit from their previous independent learning, which was teacher-directed. Students were told exactly what they had to do for their self-access language learning. Many students mentioned that they did not like what they had done for their independent learning. They usually copied their friend's work for submission without studying anything. This clearly reflects the positive effect of learner training on

students' attitudes towards independent learning. Based on their new independent learning experience, students could make judgments on what is beneficial for them as independent learners.

Second, learning enjoyment plays a vital role in changing students' attitudes towards independent learning. Students need to experience enjoyment with their independent learning. Without learning enjoyment, positive attitudes cannot occur. There are several factors that create students' learning enjoyment in this study. According to the findings from the questionnaire (see Table 4.27), the first factor is the benefits of independent learning that helps them learn how to learn and improve their metacognitive strategies in terms of problem-solving ability and learning monitoring and evaluation. Clearly, there is a close relation between benefits of independent learning and enjoyment. This reinforces the value of independent learning and its positive effect on positive learner feelings.

The second factor is related to the advantages of the web or EDO. Students from the MS and SS groups reported the same results on the EDO in that it was convenient in terms of time and place of study. Students also mentioned about the quality of the EDO: that it was interesting, with a variety of topics for their own selection. Moreover, it provided tests with immediate feedback in terms of scores of the exercises and evaluative feedback such as 'excellent', and 'very good'.

Students in the LS groups reported the same on the qualities of the EDO as WBI, according to the findings from the learning record sheet.

'I can study at home, very convenient. This makes me improve my reading skills' (H/LS).

'Reading texts are various and close to your life' (H/LS).

'It's the independent learning and I can check answers' (L/LS).

Obviously, what students mentioned about the qualities of the EDO as WBI correspond to specific features of materials for independent learning as pointed out by Dickinson (1987). It can be said that the EDO materials have two broad qualities, i.e. cognitive and affective qualities. The cognitive qualities lie in the input from a variety of reading topics for students to choose from situation as per their interest and proficiency level. This created a meaningful learning for individual students since they had choices for their learning and they could study the materials that were appropriate for their proficiency level. Also, they could study at their own pace. The

affective qualities are equally important. They help increase learning motivation. For instance, the evaluative feedback of the EDO positively enhances students' motivation to try harder for better improvement. Based on the counselling data, one student from the L/MS group mentioned that she really liked it when she received 'excellent' from the web, which made her eager to want to perform better next time. In short, both cognitive and affective qualities of the web are crucial as effective materials for independent learning (Lee, 1996). This provides the implication on how to select effective web-based independent learning materials.

Another factor, besides the qualities of the EDO that may give an explanation why students enjoyed independent learning on the web, which led to a change of their attitudes towards independent learning, is concerning the teacher. However, this finding was reported only by the low proficiency students in the MS and SS groups (see Table 4.27). Students pointed out that the teacher/author was kind, attentive, and approachable and had good rapport with students both in and out of class. All these made their learning enjoyable.

Giving feedback is one example showing that the teacher was attentive to the students' learning needs. One student mentioned that she liked to read the teachers' feedback and she would write more details in the learning record sheet since this would encourage the teacher to write more as well, in response to any points she mentioned in the record sheet. Moreover, students in the MS and SS groups reported that the teacher's feedback was useful (see Table 4.29). Some excerpts are as follows.

'We knew our weaknesses, but sometimes we couldn't correct them. The teacher's advice helped us find the method or way to solve the problems. So, we could correct our weaknesses' (L/MS).

'If I have a problem, the teacher would help solve it and she was like a mirror reflecting me myself (very nice!). Also, sometimes she was like a consultant (this is true, indeed)' (L/SS).

'It enabled me to know what I should improve or make it correct' (L/SS).

Regarding feedback, the teacher/author tried to provide informational feedback which students could exploit to make further decisions on their learning. In other words, they were encouraged to perceive that they were in control of their learning process. The teacher encouraged students to see their own learning and development as well as weaknesses. The learning activity was therefore not controlled by the teacher. Informational feedback leads to intrinsic learning

motivation. As Ushioda (1995) states, informational feedback helps generate positive self-perceptions, which sustains rather than hinders intrinsic learning motivation.

Based on the students' statements on the feedback that they received from the teacher/author, it clearly shows that the informative feedback is effective in enhancing their learning enjoyment and intrinsic motivation to learn.

In conclusion, the learner training had the positive effect on students' positive attitude towards independent learning. There are two major reasons to explain. The first one is on the benefits of independent learning in terms of freedom to learn, learning monitoring and evaluation, learning effectiveness, and affective factors. The second reason is learning enjoyment which was caused by benefits of independent learning, qualities of the web and the teacher.

2. Developing Confidence

The questionnaire findings from both high and low proficiency students in every group of treatment show that they all had moderate self-confidence for their independent learning. The data analysis (see Tables 4.8 and 4.11) shows that they highly liked the teacher to be their supporter all the time so that they could be confident in their learning, and they highly wanted the teacher to tell them clearly what they should learn and do in and out of class, except the high LS students who reported a moderate level. The qualitative data from the learning record sheets support the quantitative data finding. Some students in both levels of proficiency mentioned a negative side of independent learning. For instance, they did not know who they should consult with when they had a problem (H/MS, L/LS). Also, they thought independent learning was good but it was hard to do so (L/MS).

The difficulty can be harder since it was independent learning outside class without the presence of the teacher. Also, although they thought independent learning was beneficial for them, they found it hard to do so (L/MS). As discussed earlier, the findings on the students' past independent learning experience (see Tables 4.29 and 4.30), which seems to be teacher-directed, could shed light on their lack of high self-confidence to learn independently outside class.

After all, the findings reflect the teacher-dependent characteristic of the students at least to some extent. The possible reason that may be able to explain the characteristic of teacher-dependence of the students even though they were

psychologically trained for being the independent learners is the Thai learning context which is claimed to have some influence from the Thai culture.

Influence of the Thai Culture

The work of Hofstede (1986) is a good source for an investigation of the impact of culture on students' learning behaviours. Hofstede conducted cross-cultural research in over 50 countries including Thailand and came up with the four dimensions model of cultural differences among societies, i.e. individualism/collectivism, large/small power distance, strong/weak uncertainty avoidance, and masculinity/femininity. Among these four dimensions, analysis of the first two dimensions appears to give logical explanations on the teacher-dependent characteristic of the students.

Hofstede contrasts individualism and collectivism. Individualist cultures value individual interest, while collectivist societies value social or 'in-groups' relation. A collectivist dimension encourages individuals to perceive themselves as an inseparable part of the in-group. People in the collectivist societies think of themselves as 'We' rather than 'I' (Littlewood, 1999). According to Hofstede, Thailand is under the collectivist label. When applied to the teacher-student and student-student interaction, the collectivist dimension is distinguished from the individualist dimension in several aspects. Among them, in the collectivist societies *students expect to learn how to do* while *students expect to learn how to learn* in the individualist societies. Apparently, there seems to be a mismatch between the cultural characteristics of Thai students and the expectations of an independent learning approach.

Another dimension which could explain the teacher-dependence of the students in this study is the power distance. In large power distance societies like Thailand, the less powerful people in a society accept inequality in power and consider this as normal (Hofstede, 1986). Hallinger and Kantamara (2001) add that in terms of social expectations, it is not simply a matter of superordinates desiring authority, but within this large power distance culture subordinates expect them to exercise their legitimate power. Likewise, some differences in teacher-student or student-student interaction related to the power distance dimension are demonstrated by Hofstede as follows. In large power distance societies, a teacher merits the respect of students, teacher-centred education is emphasised, students expect teachers to

initiate communication, and students expect teachers to outline paths to follow. The interaction in small power distance societies is just in an opposite way. It is noted that most cultures which are high in collectivism are also high in large power distance.

The Thai culture is obviously influential to the Thai learning context. Deveney (2005) carried out a study to investigate aspects of Thai culture and its impact on Thai students in the international school in Thailand and found out that in Thai schools the communication was mainly one-way, i.e. from teacher to students, and children were taught to be silent in class so they could listen to the teacher. She labelled this characteristic a passivity of Thai students. In addition, the data collected from students aged 10-11 years who experienced studying in the Thai schools before the international school reveal that the Thai educational system is formal and teacher-centred. Large class size of 40-60 students in each class was also a hindrance to implementing a student-centred approach and it was very challenging for the teachers to do so.

Furthermore, the finding shows that Thai culture was perceived by foreign teachers as having a significant impact on learning. Being aware of the response bias, the author pointed out that although a number of the responses appear to be based on stereotypical viewpoints, there was no argument from the group members to the contrary. The author concludes that there is the need to create a positive and supportive environment where students can feel confident to participate in class discussions, which is the top of the list of important factors perceived as necessary when teaching Thai children. Although the study carried out by Deveney concerns much younger learners than the undergraduates who were the subjects in this present study, the kind of passivity which represents an inability to be independent learners may continue to be a characteristic of Thai students in later stage of education. In other words, it is something culturally inculcated from an early age and difficult to change.

In short, Thai culture on the collectivism, which expects students to learn how to do, not how to learn, and power distance, which results in a perception on teachers as authority figures plays a vital role on students' learning. Students appear to respect their teachers and expect them to exercise their authority. This sheds light on the lack of high self-confidence for independent learning and the characteristic of teacher-dependence of the students in this present study.

The finding on the lack of self-confidence to learn independently was similar to Thomson's (1996) research finding indicating that Asian students lacked self-confidence in all areas of self-assessment aiming to help them develop self-directed learning. However, the finding of the present study disagrees with the finding of the research undertaken by Lin (1996) suggesting that students who were teacher trainees gained confidence and independence after receiving the learner training for three semesters. As pointed out earlier, the reason may be because of the time factor -- three semesters for Lin's study, but only one semester for the present study. Another reason might be due to stereotypes of subjects. The subjects of Lin's study were teacher trainees who might be better aware of the value of learner independence than the second year undergraduates of this present study.

Role of Teacher in Independent Learning in Thai Learning Context

The finding on the teacher-dependent characteristic of the students in the present study clearly leads to the crucial role of the teacher emerging as the central theme in the mode of independent learning in the Thai learning context. In this present study, students appear to appreciate the role of teacher as facilitator, helper, supporter, and counsellor in enhancing their independent learning capacity. The findings from the counselling and usefulness of the feedback also reinforce the importance of the teacher in this mode of learning although the data were collected from the two groups, i.e. MS and SS. From the counselling session, the teacher could encourage individual students to take responsibility for their own independent learning and create rapport with them, which showed that the teacher was interested in the students and their learning was meaningful. Learning motivation was enhanced as a result. The questionnaire findings on motivation to learn indicate that almost every group of students of both proficiency levels had high motivation.

However, it is noted based on students' report of their learning enjoyment (see Tables 4.26 and 4.27) that only the low proficiency students of the MS and SS groups pointed out the teacher's roles as one factor of their independent learning enjoyment. They mentioned that the teacher encouraged them to think by themselves, was approachable and had good rapport with students in and out of class, was attentive and kind, and delivered good teaching. The feedback which is considered as a dialogue between the teacher and each student is the way for the teacher to enhance students' metacognitive strategies. Metacognitive strategies are necessary for

independent learning by scaffolding students to be more effective in monitoring and evaluating their own learning as well as solving learning problems by themselves; and to generate a good rapport between the teacher and students, which definitely gives rise to affective factors for effective learning or positive attitudes towards independent learning. These appear to be the reasons why students mentioned the teacher's feedback led to learning motivation and effort to perform independent learning.

The findings on the supportive role of teacher call for any teachers who want to promote independent learning to be aware of their cognitively and affectively supportive role. Such role can have an important effect on students' independent learning, in particular on the low proficiency students who seem to need more care, nurture, and benevolence from the teachers than the high proficiency students. The finding also supports what Dickinson (1987: 2) maintains, '... Autonomy is achieved slowly, through struggling towards it, through careful training and careful preparation on the teacher's part as well as on the learner's ...'. To become independent learners depends on the help learners gained during their time of taking learning responsibility (Holec, 1981). Clearly, it is not easy to develop learners to be independent learners since the pedagogy can be gradually developed and challenging for the teachers (Breen and Mann, 1977).

In short, the characteristic of teacher-dependence resulting in a lack of high self-confidence for independent learning of the students appears to receive the influence from the collectivism and power distance. These two cultural dimensions have a causative association with the appreciation of the supportive role of the teacher in helping students enhance their learner independence. Therefore, what can be concluded is that learner independence or autonomy in Thai learning context needs to be 'glocalised' (Schmenk, 2005). Glocalisation alludes to a heterogeneous blend of global and local practices. Glocalisation of learner autonomy is suggested in order to successfully promote learner autonomy in many learning contexts. Only if the cultural backdrop of autonomy in Western traditions is not neglected but given more serious consideration, can autonomy become a crucial notion in many cultural contexts. Meanwhile, specific local language learning environments must be accepted. To apply the concept of glocalisation to the learning context of this present study, learner independence needs to be promoted by having students take charge of their own independent learning. It is clear from the qualitative findings that students in every group valued independent learning. However, the culturally induced

stereotype of the students needs to be taken into account in order to facilitate the process of becoming independent learners. Help, support, guidance, understanding and care need to be given to the students although this reflects that students are not ready for independence (Cotterall, 1995a). Nevertheless, since independence and autonomy can be gradually developed the teacher as a facilitator and counsellor can gradually give the full learning responsibility to students until they can become independent.

3. Developing Self-Esteem as Learners

Drawing on the findings from the learning record sheet on the item asking about their overall performance from doing their independent learning each time (see Tables 4.14 – 4.19), the three high proficiency groups rated their performance higher than the low proficiency groups. For the high proficiency groups, the first positive reason for their satisfactory performance was that they could understand the texts and obtained good scores which showed that they could pass their learning criteria set in the learner contract. In contrast, the first reason given by the three low proficiency groups was that they could get fair or low test scores due to text and test difficulties. These findings may reflect that the high proficiency students are more likely to have more self-esteem than the low proficiency student if the self-esteem is related to the sense of competence showing the ability of learning. However, the findings do not convey the meaning that the low proficiency students did not develop their self-esteem from their independent learning experience.

The findings from the learning record sheets show that both high and low proficiency students in each group developed their self-esteem as learners.

'I can improve myself and know in which aspects I should improve myself' (H/MS).

'I can use my own knowledge and can evaluate how much I understood' (H/SS).

'I started to understand and know reading techniques better' (H/SS).

'I learned that the mistakes were from me, myself. It helps me know my weak points' (H/LS).

'I'm improving' (H/LS).

'I understood the story and achieved my reading objectives' (H/LS).

'I believe that if we apply this mode of learning for a long time, it will help us improve a lot' (L/MS).

'I know my weaknesses and how to improve myself' (L/MS).

'I felt the test scores weren't satisfactory since I didn't concentrate. I was worry about the mid-term exam' (L/SS).

'Though this time I could understand and get good test scores, I need to improve more the next time' (L/SS).

'I tried harder and this made me improve' (L/LS).

'I didn't know vocabulary so I couldn't understand the text that much' (L/LS).

'I can learn by myself, making me active and try harder' (L/LS).

Besides that, the data from the counselling sessions with the MS and SS students indicate that students thought that they were improving. The teacher/author usually asked individual students whether they felt that they were improving. Students elaborated on their answer that they could read and understand more, and could use more strategies that were taught.

'We practised using pre-reading strategies and they worked. Guessing what the reading text would be about by looking at the pictures really helped reading comprehension of the text. We didn't need to read the whole things' (H/MS).

'The scanning strategy really works for me' (H/SS).

All these statements clearly show that students view that learning is in their control. Success results from their effort and use of strategies while failure is from themselves such as a lack of vocabulary and concentration.

It can be said that learner training which aimed to help students develop the capacity to be independent learners and taking control of their own learning had a positive effect on developing students' self-esteem as language learners. According to Dickinson (1995), self-esteem is developed when students are in control of their learning, and if they are not succeeding it is because of factors like not working hard enough, or using the wrong strategies.

One important explanation for the development of self-esteem may be due to a set of learning objectives or goals. Setting learning objectives or goals encourages students to commit to their learning although the level of commitment varies depending on how much each student values goal achievement or is determined to achieve such goals.

To encourage students to seriously commit to their learning objectives, the teacher/author emphasised to students to set realistic goals that they could achieve with less effort at the early stage of their independent learning. By doing so, learning motivation was enhanced. Most students set short-term learning objectives, i.e. each week or every two weeks of their independent learning on the web. This is specifically the case for the MS group which was required to submit their work every week. The SS group usually set their learning objectives every two weeks in relation

to the requirements for work submission. For the LS group most students set their learning objectives every week.

Besides setting a short-term learning goal, in order to achieve their learning objectives, students were asked to set their learning criteria in the learner contract. Most students in every group set their learning criteria as 'able to read and comprehend the texts and do the test and obtain the score of 40, 50, or 60%, for instance' (see Tables 4.13.1 – 4.13.6). It is clearly noted that most students in every group used the exercise or test scores as the criteria to determine their learning success. They pointed out that the scores was an indicator of their reading comprehension which reflected their reading comprehension improvement. At a later stage, students set higher test scores as the criteria to reflect their learning improvement.

In short, there is some evidence to show that students developed their self-esteem as learners. Learning to take control of their own learning boosted their self-esteem. One important way to help students develop their self-esteem as learners is to train them to set learning objectives or goals which need to be realistic and achievable. By doing so, students are motivated to commit to their learning objectives and have a positive feeling on their successful learning experience. Positive learning experiences are therefore vital and students should be engaged in successful learning experience (Ushioda, 1995). Therefore, a positive learning experience has a very close relation to the learners' self-esteem.

However, it is noted that there seems to be a conflict between the characteristic of teacher-dependence reflecting a lack of self-confidence and the development of self-esteem, considering that self-confidence is linked to self-esteem (Cotterall, 1995a). This may indicate that self-esteem does not always lead to self-confidence. Students may have self-esteem which results from the value of independent learning in having students taking control of their learning. However, this may not be adequate for students to have high self-confidence for their independent learning without the teacher. The teacher therefore has a vital role to play in helping or giving support to students. The implications are that independent learning is a legitimate mode of learning and the teacher's supportive role is central to help students become independent learners.

4. Cognitive Strategies or Reading Strategies

There are some points worth discussions in regard to use of reading strategies by students.

Use of Dictionary

The cognitive strategy that students tended to use most frequently is use of dictionary (see Figures 4.4 and 4.8). The similar finding is also reported by Wimolkasem (2001). The reason that can explain why students opted for use of dictionary the most is that vocabulary was the number one difficulty that they encountered the most.

After all, the finding on frequency of dictionary use corresponds to the findings from the learning record sheets on the fact that students encountered difficult vocabulary the most as their learning problem, which caused a reading comprehension problem. Besides trying to guess meanings from context clues as reported more often by the high proficiency students, students of both proficiency levels used a dictionary to solve this cognitive problem. Macaro (2005) supports dictionary use based on the condition that students should guess meaning from the context, then check with the dictionary. By doing so, vocabulary acquisition can be improved. Fraser (1999 cited in Macaro, 2005) supports Macaro by maintaining that ignoring words completely will lead to a possibility of misinterpretations of the text or a lack of detailed understandings. Also, vocabulary growth will be insufficient.

It can be concluded that using a dictionary can be a good reading strategy that can help better understanding of the text provided that guessing strategy is not ignored. In addition, Macaro (2005) adds that students must use metacognitive strategies to decide how often they should look up words in the dictionary. This clearly calls for training on vocabulary-related strategies to help students improve their reading comprehension ability.

Re-Reading Strategy

It is clear from the finding from the learning record sheets that students of both proficiency levels applied the re-reading strategy or even 'read several times' strategy for their better text comprehension. This finding is also consistent with the finding from Wimolkasem's (2001) research. Bereiter and Bird (1985) explain why re-reading occurs. The two main reasons are the readers may fail to comprehend the last

segment they read or they lose connection with previous sections. In short, although re-reading shows difficulty in text comprehension that the students in this study encountered, the re-reading can also be considered as a key problem-solving strategy. It reflects that they could monitor their reading comprehension and control their reading activity to understand the text (Bereiter and Bird, 1985).

It should be noted that the re-reading strategy is not included in the reading strategy checklist, but students mentioned this strategy. This indicates that students are flexible in their learning strategy use and they know what strategies they should use for a particular task even though they are not explicitly taught.

Frequency of Strategy Use and Learning Effectiveness

The findings from the post-questionnaires on use of cognitive and metacognitive strategies show that students of both proficiency levels used cognitive strategies less than metacognitive strategies, which is supported by the findings from the reading strategy checklist. However, overall the findings on the frequency of both cognitive and metacognitive strategy use show that the high proficiency students appear to use more strategies than the low proficiency students. The finding corresponds to the results from the reading strategy checklist. The frequency of strategy use revealed by Tables 4.20 and 4.23 is 947 and 840 by the high and low MS students respectively. For the high SS group the frequency is 611 (Table 4.21) and 362 for the low group (Table 4.24). The frequency of the high LS group is 937 (Table 4.22) and 649 for the low LS group (Table 4.25). The findings support the existing research finding (Gan, 2004; Wimolkasem, 2001). These findings suggest that there is a correlation between the frequency of strategy use and learning effectiveness.

However, the findings from this present study seem to suggest a different interpretation. The frequency of strategy use of the students of both levels of proficiency invites speculation on whether there is a relationship between frequency of strategy use and learning effectiveness. It is obvious that the SS students of both levels of proficiency used the strategies less than the other two groups. However, the statistical test shows that there was no significant difference in terms of students' English reading comprehension ability. Nonetheless, it is not the purpose of this present study to investigate the relationship between the frequency of strategy use and learning outcome; therefore, this points out the question for further investigation.

5. Metacognitive Strategies

Metacognitive strategies refer to the independent learning management of the students. Students were trained to plan, monitor and evaluate their own learning. Based on the findings from the questionnaire under the heading 'capacity to learn independently', the H/MS and H/LS groups had a high capacity for independent learning, while it was moderate for the H/SS group. The three low proficiency groups had a moderate capacity for their independent learning management.

The findings suggest that the learner training had more positive effect on the metacognitive strategies of the high proficiency students than those of the low proficiency students. Reasons that may explain this is the characteristics of the good language learners or high proficiency students. According to Jerdan (1993), high proficiency students have more self-directed effort than low proficiency students.

However, the finding on the case of the H/SS group showed that the moderate level of their metacognitive strategies for their independent learning indicates an inconsistency with the expected findings compared with the other two high proficiency groups. The only reason that might explain this is that most of the H/SS students who were majoring in advertising seemed to be very busy with their project work (while public relations was the major of most L/SS students). Due to the nature of their major, they were required to do many projects such as creating and producing advertisements. This may also explain why they spent the least amount of time on independent learning compared to the other two groups. The evidence for a lack of time for learning can be found from the learning record sheet (Table 4.15). Among the three high proficiency groups, only the SS students mentioned a lack of time as one of their learning problems and said they would find more free time for independent learning. A lack of time that prevented serious learning may have caused these students to feel that they were not highly capable of managing their independent learning compared to the other two groups.

5.3 Recommendations of the Study

Based on the findings and discussions of the findings, there are a number of recommendations for research consumers and further research. They are the following.

5.3.1 Recommendations for Research Consumers

5.3.1.1 For Educational Administrators

Administrators should promote independent learning through WBI that has teachers as counsellors providing help and support, or incorporate it as the language teaching policy because this mode of learning is promising to develop learners' capacity for being independent learners and will finally fulfil the educational goal of the Ministry of Education, which emphasises learner-centred instruction and life-long learning of Thai students.

5.3.1.2 For Teachers of English

1. Although the finding indicates that different degrees of support for learner independence do not have effect on students' English reading comprehension ability, students appreciated the value of independent learning and the supportive role of the teacher. It is recommended that independent learning be applied to any English course and teachers act as a counsellor providing help and support to students, which is affectively beneficial for language learning. Students should not be left to perform independent learning without help and support from the teachers.

2. According to the finding of the first objective, teachers should be well aware of the students' independence level and adjust their role in providing appropriate and professional advice to help them become more independent in their learning, which will give rise to more learning effectiveness and achievement.

3. The qualitative findings of the present study reveal the importance role of the teacher in the process of helping learners develop their capacity for independent learning and autonomy. That the teacher/author acted as the counsellor and resource providing feedback to their learning was appreciated by students for the positive and close teacher-student relationship fostered, as well as for the support provided, which is crucial for helping students develop positive attitudes towards independent learning and their English learning experiences. Therefore, teachers should be aware of their role in helping students pass the transition from teacher-dependence to self-dependence.

4. Based on the finding of the second objective, teachers should be aware that levels of English proficiency have an effect on English reading comprehension ability of students. Therefore, teachers should carefully take the

levels of proficiency into consideration when delivering teaching. Students with different English proficiency levels should be given different strategies and strategy training. Appropriate strategy training as per their level of proficiency should effectively help students improve their reading comprehension ability.

5. To help students improve their English reading comprehension ability, teachers are recommended to teach strategies on vocabulary since students of both high and low proficiency mentioned vocabulary as their major difficulty for their reading tasks. In addition, teachers should focus on cognitive strategies and encourage students to use more cognitive strategies on their reading tasks.

6. According to the finding of the fourth objective, teachers should be aware that a change of attitudes towards independent learning requires gradual development over time, particularly for the low proficiency students. Therefore, teachers should continuously psychologically train students to appreciate the value of this mode of learning.

7. Learner training should take into account the length of the training if evidence of learning achievement is to be found. The finding of this present study and a review of related literature on time factor for learner training or strategy training suggest a longer time than the 12 hours used for the explicit learner training in class and the 9-10 weeks of the exercising of independent learning by students outside class.

5.3.1.3 For Teacher Training

1. Teachers should be trained or practise how to provide feedback that is informational to students in terms of cognitive and affective effects since feedback is the way to motivate students' learning and train them to attribute their learning success or failure to their learning efforts. In this way, the teachers can help students change their learning habits or behaviours in a positive way.

2. The present study integrates learner training of both psychological and methodological preparations in the regular classroom learning plan. Students therefore get used to language learning and use of learning strategies taught and trained by the teacher. This instructional approach calls for the teachers to be trained how to deliver learner training so that strategies are the central part integrated with the normal lesson plans according to the pre-determined course syllabus.

3. From the counselling data, many students pointed out their disappointment with their past independent learning experiences; therefore, it is recommended that teachers should be trained how to effectively implement independent learning.

5.3.2 Recommendations for Further Research

1. There is the need to conduct further studies exploring the impact of different levels of support for independence among students from the same academic disciplines in order to compare the findings.

2. Replication of this study should be conducted with statistically sufficient subjects in order to ascertain the findings or obtain different statistical results.

3. Replication of this study is recommended for more extended or longitudinal research.

4. The findings revealed that the subjects of both high and low proficiency levels were satisfied with and valued the independent learning mode, to some extent; therefore, similar studies should be conducted with learners in different fields to strengthen the reliability of the findings of this present study.

5. Further studies on learner independence enhanced through web-based instruction are recommended for other English language skills besides reading in order to investigate the effects of different degrees of support for learner independence on each particular language skill to explore learning achievement.

6. In regard to the methodological learner training on learning and reading strategies, this present study applied the same learning and reading strategies for the training of students with both levels of proficiency. Further studies on the strategy training are suggested to take the proficiency levels of students into account because students with different levels of English proficiency may need to be given different strategies and therefore different strategy training in order to promote appropriate and effective use of strategies of students with different levels of proficiency.

7. Further studies should investigate the relationship between the frequency of strategy use and learning outcome in order to strengthen the research findings in this area.

5.4 Chapter Summary

This last chapter begins with the summary of the research study, i.e. the problem statement, research objectives, subjects, research design, research instruments, data collection procedures, data analysis, and findings. Then, the research findings were discussed in relation to the research objectives and based on the triangulation of quantitative and qualitative data. The discussions explored the possible factors to explain why there were no effects of the three degrees of support for learner independence through WBI on students' English reading comprehension. These possible factors are the learner training, the same basis of independent learning students undertook outside class, different academic fields of study, time factor, and the sample size. Although the main effects *per se* did not exist, the mean scores of the reading post-test seem to indicate the promising outcomes. However, the conclusive claims may not be possible to make due to a lack of the control group; therefore, this interpretation needs to be treated with care and caution.

The effects of levels of English proficiency of the students on the English reading comprehension ability and the effect size were discussed based on the possible explanations of the good language learners' characteristics and use of learning strategies by high and low proficiency students. The final reason was related to the theoretical foundation of learning strategy training. The interaction effect of different degrees of support for learner independence did not exist and then was not discussed.

The discussions on attitudes towards learner independence of the students were based on the possible explanation that independence is a slow process and can be developed gradually. Another explanation is that independence depended on the students' personal attributes. In this present study, the students' enthusiasm was considered as the attribute that could have the effect on students' attitudes toward learner independence. The effect of learner training on students' attitudes towards learner independence was then discussed on the five areas, i.e. changing attitudes, developing self-confidence, developing self-esteem as learners, cognitive and metacognitive strategies.

The Chapter then discussed a number of recommendations for research consumers and further study.