

Impacts of Self-directed Learning Activities on Students' English Proficiency and Self-directed Learning Ability

ผลของกิจกรรมเรียนรู้แบบนำตนเองที่มีต่อความสามารถทางภาษาอังกฤษ
และความสามารถในการเรียนรู้แบบนำตนเองของนักศึกษา

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Abstract

The present study was an attempt to compare the students' English proficiency and self-directed learning ability between the experimental and control groups after the intervention. To fulfill the purposes of the study, a 12-week experimental study was performed with two groups of students. Students in the control group were taught by the traditional method while students in the experimental group studied through self-directed learning activities. The research instruments used in this study included an English proficiency test and a self-directed learning ability questionnaire. The data were analyzed by using independent t-test and One-way Analysis of Covariance. Results from the statistical tests revealed that there were statistically significant differences of the mean scores at the level of .05 in terms of English proficiency and self-directed learning ability between the two groups after the experiment. The students studying through self-directed learning activities gained higher scores than the ones studying with the traditional way in two aspects.

Keywords: self-directed learning, language learning

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อเปรียบเทียบความสามารถทางภาษาอังกฤษและความสามารถในการเรียนรู้แบบนำตนเองของนักศึกษาในกลุ่มทดลองและกลุ่มควบคุม โดยทำการทดลอง 12 สัปดาห์กับนักศึกษาทั้ง 2 กลุ่ม นักศึกษาในกลุ่มควบคุมได้รับการสอนด้วยวิธีการปกติ ส่วนนักศึกษาในกลุ่มทดลองเรียนผ่านกิจกรรมเรียนรู้แบบนำตนเอง เครื่องมือที่ใช้ในการทดลองได้แก่แบบทดสอบวัดความสามารถทางภาษาอังกฤษและแบบวัดความสามารถในการเรียนรู้แบบนำตนเอง ข้อมูลที่ได้นำมาวิเคราะห์ด้วยค่าทีและการวิเคราะห์ความแปรปรวน

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ร่วม ผลจากวิเคราะห์พบว่าภายหลังการทดลองนักศึกษาสองกลุ่มมีความสามารถในการใช้ภาษาอังกฤษและการเรียนรู้แบบนำตนเองแตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 โดยนักศึกษาที่เรียนด้วยกิจกรรมการเรียนรู้แบบนำตนเองมีคะแนนเพิ่มขึ้นมากกว่ากลุ่มที่เรียนโดยวิธีปกติทั้งสองด้าน

คำสำคัญ การเรียนรู้แบบนำตนเอง การเรียนภาษา

1. Introduction

The concept of self-directed learning originated in the field of adult education, and many terms used closely to this kind of learning include independent learning, self-planned learning, autonomous learning, self-education, and so forth (Roberson, 2005). The core concept of self-directed learning, as given in the Longman Dictionary of Language Teaching and Applied Linguistics, involves learners' taking charge of their own learning. The learning particularly concerns learners' selection of learning contents and methods to achieve their learning goal. Knowles (1973) describes self-directed learning as a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. This means the learners take charge of their own learning. Whenever students are aware of some needs for learning, they will continue their studies without being controlled by the others.

In addition, Hiemstra & Sisco (1999) defines self-directed learning as individualizing instruction, a process focusing on characteristics of the teaching-learning transaction. In essence,

this aspect of self-direction centers on those factors external to the individual. Self-direction is best viewed as a continuum or characteristic that exists to some degree in every person and learning situation. Individual learners can become empowered to take increasingly more responsibility for various decisions associated with the learning endeavor. Gibbons (2002) identifies four key characteristics of self-directed learners including independence, self-management, desire for learning, and problem-solving. Firstly, self-directed learners are fully responsible people who can independently analyze, plan, execute, and evaluate their own learning activities. Second, self-directed learners can identify what they need during the learning process, set individualized learning goals, control their own time and effort for learning, and arrange feedbacks for their work. Third, for the purpose of knowledge acquisition, self-directed learners' motivations for learning are extremely strong. Lastly, in order to achieve the best learning outcomes, self-directed learners make use of existing learning resources and feasible learning strategies to overcome the difficulties which occur in the learning process.

Basically, learners need to have a certain learning capacity in order to become successful learners. According to Littlewood (1996), the

capacity refers to ability and willingness to assume learning responsibility. The ability includes both the knowledge and skills for carrying out whatever choices the learners see appropriate for their learning. Self-directed learning (SDL) can be learned and taught, and students might need specific guidance and feedback to motivate them towards self-directed learning (Grabe & Stoller, 2002). In the self-directed learning model, students are assumed to have increasing responsibility for learning. To encourage students to have more active participation in learning and to direct their own learning processes quite efficiently, numerous techniques can be employed to build up self-directed abilities of learners as shown in many pieces of research such as Khomson (1997), Suwannasilp (2000), Wattananamkul (2001), Pornpan (2003), Saha (2006), Kim (2010), and Phongnapharuk (2007). In these studies, it was also found that not only students' self-directed learning abilities increased, but also their language proficiency.

Rogan (2003) states that it is necessary to examine what motivates students toward self-directed learning. Students need specific guidance and feedback to motivate them towards self-directed learning, which might not be consistent with philosophical basis of SDL. Therefore, the teacher should help students develop competence as self-directed learners. At first, students might find the idea of self-directed learning strange because they are accustomed to having teachers tell them

what they are to learn and how, so they are reluctant to make decisions for themselves. Therefore, self-directed learning has been extensively enforced since it was stipulated in the Chapter 4 of the National Education Act of 1999, supporting life-long learning as one dominant outcome of learning reform to promote the ability to learn and to continue to learn independently and autonomously (ONEC, 2001). So, most language curricula in higher education level have been much developed accordingly, and learning activities to promote autonomous learning of the students are being organized in many universities. At Bangkok University, the teaching and learning process of EN111 course has just been adjusted to be more communicative and focus on the learners. Students have more chances to control their learning. The picture of students in groups deciding how tasks can be managed to complete their assignment is usually seen in all classrooms. The opportunities for presenting work and sharing what they think are provided more. However, the activities included in this course still do not promote enough self-directed learning skill of the students. According to Roberson (2005), self-directed learning requires students to be aware of some needs for learning, as well as have an ability to plan or take charge of their own learning. To achieve the goal, teachers at the Language Institute had to study more on self-directed learning to incorporate certain activities into a part of English course.

As such, the three activities including learning contract, peer review, and self-assessment were selected for EN 111 course as they support four key characteristics of self-directed learners that Gibbons (2002) stated earlier. These activities are likely to enhance the learners' independence, self-management, desire for learning, and problem-solving. To pilot the course, the three self-directed learning activities were employed in a class managed by the researcher. Even though employing many activities in the classroom and conducting a research study at the same time was not an easy task in terms of collecting the data, the researcher was not discouraged due to the belief that there should be some positive outcomes. As such, it is interesting to find out whether these activities have something to do with students' language proficiency as well as self-directed learning ability. If so, it is necessary to find out if there are any significant differences in students' language proficiency and self-directed learning ability between the group studying through self-directed learning activities and the one studying with the traditional way after the experiment. The findings will provide a new choice for all language teachers to implement more activities in their classrooms for the sake of students' language proficiency development, motivation to learning and autonomy.

2. Objectives of the Research

This study contains two main research objectives as follows:

2.1 to compare English proficiency between the experimental and control groups after the intervention.

2.2 to compare self-directed learning ability between the experimental and control groups after the intervention

3. Scope of the Research

3.1 The subjects in this study included 80 undergraduate students enrolled in EN111: Fundamental English in semester 1/2010.

3.2 In this study, the independent variable was the teaching process based on three self-directed learning activities while the dependent variables were the students' English proficiency evaluated by the test and their self-directed learning ability assessed by the questionnaire created by Guglielmino (1977).

4. Research Methodology

4.1 Research Design

The population in this research study was 5,445 students enrolled in EN 111 course of 3 credits in the first semester of 2010 academic year at Bangkok University. During the first semester, they were assigned to 123 sections by the Registration Office. As this study was conducted in a university setting, it was difficult for each subject to be randomly selected and assigned to the control and experimental groups. Therefore, it was more feasible to adopt the quasi-experimental design, which provides reasonable control over most

sources of invalidity (McMillan & Schumacher, 1997). So, the samples included two sections, each of which contained 40 students, got from cluster sampling since students were already assigned to their sections. One section was used for the experimental group; another one for the control group. Both groups were taught by the researcher.

4.2 Research Instruments

Two research instruments were used to assess the effectiveness of the self-directed learning activities.

The first one was English proficiency tests designed in parallel form comprising reading and writing skills, administered as pre-test and post-test. The total score was 50 points. The contents for testing students were written to cover EN 111 contents in terms of vocabulary, grammatical points, summary writing and paragraph writing. So, there were three main parts: 1) read a story and answer 5 questions 2) read a story and write a summary in 3-5 sentences 3) write a well-organized paragraph in about 100 words. Time allotted for both tests was 100 minutes. The items of the tests were constructed, verified for content validity by three experts at the English Department at Bangkok University to check and adjust its content. The experts were also asked to rate each item as to see whether it was congruent with the objective stated using the evaluation form constructed by the researcher. Then, the Item-Objective Congruence (IOC) Index was

calculated by assigning scores to three kinds of answers: congruent = 1, questionable = 0, incongruent = -1.

Basically, any items with an IOC index lower than 0.5 should be removed or revised. In this study, all items were rated higher than 0.5 of the IOC index, indicating that they were acceptably congruent with the objectives. Its content validity measured by the IOC Index was 0.87. Only 1 item needed a little adjustment in terms of language use. After that, the test was pilot tested with 40 students who were studying EN 111 during the summer session of 2009 academic year.

The second instrument was a self-directed learning ability questionnaire. The instrument most widely used in educational research to measure self-directed learning readiness created by Guglielmino (1977) was employed in this study. It consisted of 58 items, and the questions pertaining to 8 factors were labeled as follows: 1. openness to learning opportunities, 2. self-concept as an effective learner, 3. initiative and independence in learning, 4. informed acceptance of responsibility for one's own learning, 5. a love to learn, 6. creativity, 7. future orientation, and 8. the ability to use basic study skills and problem-solving skills. It was a Likert type scale questionnaire designed to measure a degree to which learners perceive themselves as having the skills and attitudes concerning the term "self-directed learning." The scale was structured with a

5-point scale for responses, ranging from always true to almost never true. The inventory was submitted to evaluate by 3 experts who have more than 5 years of experience in teaching English for establishing validity. To determine validity each item must get a score of more than 80 percent, and all of the experts (100%) agreed that the items could be used to measure self-directed learning ability of learners. The validated questionnaire was pilot tested with 20 non-subject students to test for readability and understanding of the items. The validated questionnaire was processed for determining its reliability with 40 non-subject students by the coefficient alpha technique. The reliability coefficient was .856, implying that the questionnaire was reliable.

4.3 Activities for Promoting Self-directed Learning

Three main activities were employed with the experimental group as follows:

4.3.1 The first activity was the use of a learning contract in which students stated their specific objectives over a limited period. Contracts are written agreements between students and instructors, which commonly involve determining the number and type of assignments that are required for particular scores. In this study, there were ten reading passages along with score allocation provided on the teacher's website, and students were required to choose 3-5 stories of their interest, depending on their goal set in the contract.

To begin, they were required to read the passage. Then they summarized the content of the passage in a few sentences to tell what the passage was mainly about and came up with a personal response. In addition, they needed to answer comprehension questions. Although both groups were taught how to write a summary and personal response, students in the control group studied 5 passages selected by the teacher, answered the questions, and wrote summaries along with personal responses in class.

4.3.2 The next one was "Peer Review," an activity requiring students to read each other's draft and give comments on it. "Peer Review" provided students with the opportunity to learn how to provide and receive constructive feedback. The main goal of using peer review is to help both writers and commentators to improve their writing. Students who give feedback to peer will be developing their critical thinking, and collaboration with peers contributes to the development of self-regulation that is the capacity for independent problem solving. The peer review in this study was conducted in pairs. The students were trained on the principles of peer correction and how to give feedback so that they would not encounter any difficulties when giving comments. Peer review training was available before the lesson started officially. This means they were taught how to follow the review procedure step by step, how to consult dictionaries when in doubt, and how to write

up a comment, etc. Giving feedback focused on the following issues: 1) topic sentence 2) relevant and adequate coverage of topic focusing on central idea or good supporting details 3) coherence 4) misspellings 5) mistakes on grammatical points. In this study, students in the experimental group read their peer's work and gave feedback. When the students got their own paragraph back, they had to read the feedback and made sure that they understood their peer's feedback. They could talk to each other if they did not understand the meaning of any sentences. After that they wrote their second draft at home and submit it to the teacher. However, students in the control group got feedbacks of the first draft from the teacher, corrected it, and submitted the second draft to the teacher. The number of papers to be submitted was the same, but they did not join the "peer review" activity. There were four pieces of paragraph writing in this course.

4.3.3 "Self-assessment" was an activity enabling students to take more control of their learning. Students were asked to write a free writing paragraph containing 70-100 words. The students in the experimental group assessed themselves by the checklist before each paper was then corrected by the teacher who commented on their performance based on their weaknesses. Although the self-assessment activity was utilized only for the experimental group, both groups received checking and comments from the teacher. In accordance

with the theory of self-directed learning, self-assessment is currently playing an important role in language teaching. The process provides the learners with an opportunity to judge their own learning; they are therefore empowered by gaining ownership of their learning and life-long learning skills (Chen, 2008). Likewise, Hunt, Gow, and Barnes (1989) argue that without learner self-evaluation and self-assessment, there cannot be real autonomy. Blue (1996) states a lot of benefits of self-assessment, comprising encouraging greater effort, boosting self-confidence, and facilitating awareness of difference between competence and performance as well as self-awareness of learning strengths and weaknesses.

4.4 Data Collection and Analysis

First, both groups were given a self-directed learning ability questionnaire, followed by a proficiency test of which the total score was 50. Then the experimental group was taught through self-directed learning activities while the control group was taught by the traditional way for 12 weeks. Time was limited to three hours per week for reading and writing skills. However, both groups had to do a self-study in a language lab for one hour per week. For interventional period, both groups were taught with the same content such as vocabulary, paragraph writing, how to write a summary and personal response, grammatical points, and reading comprehension, but only the experimental group received three self-

directed learning activities. The intervention was followed by the post-test and self-directed learning ability questionnaire. The mean scores of the two groups got from the proficiency test and self-directed learning ability were compared using an independent t-test and One-way Analysis of Co-variance. P values < 0.05 were considered statistically significant.

In order to confirm the reliability of post-test scores, the inter-rater approach of reliability estimates was applied. That is, the correlation coefficients between three different raters were calculated, and the results were .984 (rater 1-2), .875 (rater 2-3), and .928 (rater 3-1).

5. Results of the Experiment

Table 1 A Comparison of Pre-test Mean Scores of English Proficiency between the Control Group and the Experimental Group

Group	\bar{X}	S.D.	df	t	Sig (2-tailed)
Control Group (n=40)	23.35	6.77	78	-.389	.70
Experimental Group (n=40)	23.92	6.45			

In order to confirm the participants assigned to control and experimental groups were not initially different but homogeneous, an independent sample t-test was run. From a t-test analysis, English pre-test mean score of students in the control group was a little bit lower than that of the experimental group (23.35, 23.92), but the result shows no significant difference between the control and experimental groups. Therefore, it was concluded that the control and experimental groups were homogenous at the outset of the study. See Table 1 above.

Table 2 A Comparison of Post-test Mean Scores of English Proficiency between the Control Group and the Experimental Group

Group	\bar{X}	S.D.	df	t	Sig (2-tailed)
Control Group (n=40)	30.40	6.35	78	-2.296*	.02
Experimental Group (n=40)	33.57	6.01			

*p < .05

Hypothesis 1: The mean scores of the two groups were significantly different after the intervention.

To see the efficacy of the intervention, students' mean scores obtained from the post-test of the two groups were analyzed using an independent t-test to see if there was a statistically significant difference. Table 2 indicates that the overall mean score of the experimental group was higher than that of the control group (33.57, 30.40). In addition, a t-test analysis showed a statistically significant difference in their proficiency at a level of .05. Therefore, this hypothesis was accepted.

Table 3 A Comparison of Self-directed Learning Ability between the Control Group and the Experimental Group before the Intervention

Group	\bar{X}	S.D.	df	t	Sig (1-tailed)
Control Group (n=40)	205.18	14.68	78	2.05*	.04
Experimental Group (n=40)	197.68	17.86			

*P < .05

From Table 3, the mean score of self-directed learning ability of the control group was a little bit higher than that of the experimental group (205.18, 197.68). When the two groups' self-directed learning mean scores were compared by using an independent sample t-test, it was found that there was a statistically significant difference at the level of .05 as shown in Table 3.

Table 4 A Comparison of Self-directed Learning Ability between the Control Group and the Experimental Group after the Intervention

Source	SS	df	MS	F	p
Intercept	4333.454	1	4333.454	26.230*	.000
Pre-self-directed learning ability (covariate)	7793.839	1	7793.839	47.176*	.000
Group	1106.182	1	1106.182	6.696*	.012
Total	3727306.00	80			

*P < .05

Since a significant difference was found in self-directed learning ability of the two groups before the intervention, the post mean scores of the two groups cannot be compared with an independent t-test. The one-way ANCOVA was, therefore, used instead. Therefore, self-directed learning ability before the intervention was seen as a covariate, the teaching methods as the independent variable, and the post-self-directed learning ability as the dependent variable to perform the statistical analysis. The test for homogeneity of regression coefficients revealed that the assumption of homogeneity was met and thus it can be further analyzed by the ANCOVA.

Hypothesis 2: The self-directed learning ability mean scores of the two groups were significantly different after the treatment.

After removing the influence of covariates, the statistical result shows that there was a significant difference in the self-directed learning mean scores of both groups ($F=6.696$, $P=.012$). Therefore, this hypothesis was accepted.

Table 5 Comparisons of Pre- and Post-Test Mean Scores of Two Groups

Group	Before		After		Gained Score
	\bar{X}	S.D.	\bar{X}	S.D.	
Control Group	205.18	14.68	213.73	14.68	8.55
Experimental Group	197.68	17.86	216.78	16.19	19.10

Before the intervention, self-directed mean scores of students in the experiment and control groups were 197.68 and 205.18, and those scores increased to 216.78 and 213.73 respectively after the intervention. From a t-test analysis, the post-test mean scores of students in both groups were significantly higher than the pre-test mean scores. However, it is noted that students who were taught by self-directed learning process improved their self-directed learning ability more than those who studied by the traditional method (19.10, 8.55).

6. Discussion

This study was carried out to determine whether the self-directed learning is a better approach to teaching the English language in Thailand. The findings were discussed as follows:

1. As displayed in Table 2, students in the experimental group outperformed students in the control group, so it could be claimed that the English instruction delivered through self-directed learning activities was more effective in enhancing English language ability. Such findings could be explained that

the instruction capitalized learning experience that the students had an opportunity to control their learning, which were theoretically vital to language learning. The score increase may be particularly due to the fact that the students had more opportunities to take charge of their own learning. In this study, the learning contract helps the learner to identify his or her own learning needs and to develop learning objectives and strategies consistent with those needs. Moreover, peer review and self-assessment not only enhanced the students' knowledge, but also promoted them to be more self-directed. These activities helped to monitor learning and reflect one's own performance. These reasons can be supported by Hiemstra & Sisco (1989) stating that individual learners can become empowered to take increasingly more responsibility for various decisions associated with the learning endeavor. Such findings generally lend support to the published research in the field of language teaching and other fields that self-directed learning activities resulted in the increase of learning ability (Suwannasilp, 2000; Wattananamkul, 2001; Pornpan, 2003; Saha, 2006; Kim, 2010; Phongnapharuk, 2007).

2. It is interesting to see that students in the experimental group improved their self-directed learning ability more than those in the control group in spite of the fact that their ability was lower before the experiment (197.68/ 216.78, 205.18, 213.73). Therefore, the finding can be employed to confirm that

self-directed learning ability can be taught, learned, and enhanced in a self-directed learning environment (Grabe and Stoller, 2002). By exposing students to three activities, they could gain self-directed learning ability. This is probably because the three self-directed learning activities increased more opportunities of self-learning management and responsibility on the outcomes for the learners. By having more decision on their learning, students learned that they could direct themselves to achieve the goal. As a result, they feel more confident and have a trust in what they are doing. For example, the learning contract enabled them to choose the learning contents and methods to achieve their learning goal. They learned to plan the study by themselves. Both peer review and self-assessment activities also helped them understand and learn the assessment process. They started by examining their own work, followed by judging the work of others so that they gained insight into their own performance. This study leads to what Regan (2003) suggests that it is necessary to examine what motivates students toward self-directed learning, and the findings can support that the three activities can help them develop competence as self-directed learners.

7. Limitation of the Research

Since this research was conducted in a classroom setting, the sample size was small. Therefore, with limited samples, the generalizability of the findings should be

interpreted with caution and may extend only to this immediate population. In addition, while participating in these treatments, students enrolled in this English course needed to develop other skills comprising listening, speaking, and writing as well. Thus, students were also exposed to other types of input besides reading and writing skill.

8. Recommendations for Further Studies

First, it is interesting to achieve transferability by conducting further studies

in other contexts, with local resources or with other participants. Second, it is recommended that other kinds of qualitative instruments such as a semi-structured interview and learning logs should be included in future studies. These instruments allow a more in-depth study to gain more information on advantages, disadvantages, attitude towards self-directed learning.

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