

CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents the research methodology of this study, “Engaging Mathayom Suksa 3 Students in Multiple Intelligences-Based Activities to Promote English Language Skills and Self-Directed Learning.” This study was conducted according to the following objectives: The first objective is to compare the English language skills of the students before and after implementing of the multiple intelligences-based activities. The second objective is to explore students’ self-directed learning while engaging them in multiple intelligences-based activities. The following are the procedures incurred in this study:

1. Target Group
2. Research Instrument
3. Data Collecting Instrument
4. Data Analysis

1. Target Group

The target group of this study was the Mathayom Suksa 3 students who took English 015 on the 1st semester of the academic year 2005 at Assumption College Lampang, Lampang, Thailand.

2. Research Instrument

Research instruments were classified into two categories as delineated below:

2.1 Experimental instrument

The experimental instrument was composed of 7 lesson plans, which were based on multiple intelligences approach and principles. The design of the seven lessons was based on the infusion method and the topics were based on the curriculum of the school. Each of the lesson plans was divided into three stages: presentation stage, practice stage and production stage. The class instructions lasted for 35 hours from July to September 2005. The lesson

plans were written after the needs and multiple intelligences surveys were conducted. The surveys were conducted in order to ascertain students' strengths and weaknesses in which to be considered in the planning of activities and strategies to be included in the lesson plans. The seven lesson plans were comprised of activities that involved and drew in particular combination of intelligences. The lesson plans catered eight intelligences thus engaging students in multi-modal activities. Each lesson plan was composed of the following procedure:

1) The presentation stage

The presentation stage was consisted of various motivating activities such as asking stimulating, using an instrumental music, pictures, charts, chants, riddles, humor or realia related to the topic to activate students' background knowledge and to draw their attention and interest in the lesson. Next, the teacher asked them stimulating questions using questioning techniques to activate their background knowledge about the topic to be learned. For listening, the students listen to the conversations or texts on the tape then they answer listening exercises or note details. For reading, the texts were presented by using various reading strategies, such as modeling, jigsaw reading, listening to the story, chain or reading aloud,. Difficult vocabularies were unlocked using various vocabulary strategies such as contextual clues, elaboration, explanation and illustration. Grammar points were presented directly or indirectly. If the students need more clarifications on grammar points, they are given grammar exercises for mastery. After that, students were divided into pairs or groups to take down notes of the important details about the reading topic, to discuss, react or give their ideas and opinions about the text.

2) The practice stage

The practice stage was composed of grammar exercises, comprehension exercises, summarizing the text or by giving them another text related to the topic to discuss about, give ideas and opinions orally or in written form or a conversation text for role-playing such as dialogues, and group presentations. At this stage, the teacher went around, and observed students using observation checklist while performing their activities and exercises, such as their ability to ask and answer questions or show their ideas or opinions during the discussion.

3) The production stage

The production stage was composed of the variety of tasks such as writing in different forms with illustrations and drawings, writing a skit and performing it, and oral presentation of the topics given or students have chosen such as presenting their favorite recipe, presenting changes that have taken place in an object. Students were assessed through their performance tasks and were scored using rubrics. Listening and speaking skills were assessed through students' ability to listen and answer questions about the text, ask and present their ideas and opinions to their peers or to the class, oral presentations, and role-playing. For reading, students' performance was assessed by answering comprehension questions about the related texts. Their writing skill is assessed by expressing their ideas and opinions about the text in written form along with illustrations and drawings, writing a skit, writing about their chosen topic or a writing task applying what they learned. After each lesson, students were given a reflection sheet for them to relate step-by-step from beginning to end the process of doing the task given to them. The designing of the lesson plans was done in the following procedure:

- 1) The researcher studied the curriculum of Mathayom Suksa 3 Students Fundamental English (English 015) of Assumption College Lampang.
- 2) The researcher studied books on applying Multiple Intelligences in teaching and learning. "Multiple Intelligences in the Classroom" by Thomas Armstrong (1994), "Teaching and Learning Through Multiple Intelligences" by Bruce Campbell, Linda Campbell and Dee Dickinson (2004), "Multiple Intelligences Activities" by Julia Jasmine (1996) and several articles on applying Multiple Intelligences strategies in teaching ESL and TEFL. Considering the results of the Multiple Intelligences survey and students' need, the researcher planned and wrote the lesson plans based on the infusion method of teaching Multiple Intelligences-Based activities and adapted the use of communicative approach stages in teaching, which are presentation, practice and production stages as well as other methods and strategies in teaching the English language.

Table 1 The Summary of the lesson plans for Multiple Intelligences-Based Activities.

<p>Course Objective 1: Use language to communicate effectively in different situations or contexts.</p> <p>Terminal Objective: Students should be able to talk and write about their favorite recipe and present it.</p> <p>Terminal Objective: Students should be able to express opinions, feelings, describe and give information about their neighborhood.</p>	<p>Lesson 1</p> <p>Topic: Favorite Food</p> <p>Language functions: giving and using directions, making suggestions.</p> <p>Structures: expressions of quantity, sequence words, present simple tense, clause with before and after</p> <p>Skills: Listening, speaking, reading and writing</p> <p>Task: Writing, illustrating and presenting a favorite recipe native or foreign food.</p>	Periods 5
	<p>Lesson 2</p> <p>Topic: My Neighborhood</p> <p>Language functions: asking for and giving directions, asking for giving information</p> <p>Structures: Simple present tense, comparative and superlative adjectives, indirect questions, indefinite pronouns + infinitives, adjectives and prepositions</p> <p>Skills: Listening, Speaking, Reading and Writing</p> <p>Task: Write, describe, talk about and draw /illustrate their neighborhood, favorite place, town, city, etc.</p>	Periods 5

Table 1 (Continued)

<p>Course Objective 2: Use language to explore other country's culture and learners' culture.</p> <p>Terminal Objective: Students should be able to provide information about Thai and other countries' culture.</p> <p>Course Objective 3: Use language to obtain knowledge from other disciplines.</p> <p>Terminal Objective: Students should be able to analyze the process of changes that have taken place in an object.</p>	<p>Lesson 3</p> <p>Topic: Crossing Culture</p> <p>Language functions: giving advice about other countries' culture and tradition</p> <p>Structures: noun phrase, relative clause, expressing expectations (not supposed to, expected to, the custom to, not acceptable to)</p> <p>Skills: Speaking, listening, reading and writing</p> <p>Task: Choose a western country you're interested in and find out its customs and traditions. You may role play or sample some music, dos and don'ts, dances, dressing, festival, lifestyles, etc.</p> <p>Lesson 4</p> <p>Topic: Things Around You</p> <p>Language functions: giving instructions and talking about an observation</p> <p>Structures: simple present active voice, present perfect tense, simple present passive voice</p> <p>Skills: Speaking, listening, reading and writing</p> <p>Task: Choose any object/thing and present the process of changes that have taken place in an object. Use drawings, illustrations or pictures to present your subject.</p>	<p>Periods</p> <p>5</p> <p>Periods</p> <p>5</p>
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Table 1 (Continued)

<p>Course objective 4: Use language for further study and career development.</p> <p>Terminal Objective: Students should be able to research and talk about people who have contributed something in the society.</p> <p>Course Objective 5: Use language for personal growth, promotion of critical and creative thinking skills and life skills and live together in the society.</p> <p>Terminal Objective: Students should be able to talk about people and events</p>	<p>Lesson 5</p> <p>Topic: Impressions</p> <p>Language functions: giving information about a person or something</p> <p>Structures: simple past simple past, past progressive, simple present perfect, superlative adjectives, tense with ever</p> <p>Skills: Listening, speaking, reading and writing</p> <p>Task: Present a skit about a famous, or favorite person who has contributed to the society or country</p> <p>Lesson 6</p> <p>Topic: Tell Me More About Yourself</p> <p>Language function: describing someone's personality, identifying people, and talking about the incident</p> <p>Structures: Verb to be, adjectives describing people's appearance personality and feelings, question words, present tense, simple past tense and past progressive tense</p> <p>Skills: Listening, speaking, reading and writing</p> <p>Task: A. Students write a skit based on a news report about an incident or event.</p>	<p>Periods</p> <p>5</p> <p>Periods</p> <p>5</p>
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Table 1 (Continued)

<p>Terminal Objective: Students will be able to talk about and evaluate their personality and other people's character and behavior</p>	<p>Lesson 7</p> <p>Topic: The Way We Are</p> <p>Language functions: describing one's personality, expressing feelings, making suggestions on how to improve one's bad habit or manners.</p> <p>Structures: Verb to be, adjectives describing people's appearance personality and feelings, question words, present tense, modals and future tense.</p> <p>Skills: Listening, speaking, reading and writing</p> <p>Task: Write about the person you admire most, impressed with or you don't like. Make use of the information, vocabulary, lessons previously learned and the writing tips in your handouts.</p>	<p>Periods 5</p>
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3) Finally, the lesson plans were submitted to the thesis' supervisor at Teaching English as a Foreign Language Department, Faculty of Education, Chiang Mai University to be evaluated for its validity. Some lessons and procedures were rewritten and adjusted according to the advice of the thesis supervisor. Lesson 1 was tried out with the other group similar to the target group and adjustments were made as suggested by the thesis supervisor to cover at least a few intelligences for each lesson stage and teaching-learning activities.

2.2 Data Collecting Instrument

The data collection instruments were consisted of the pretests and posttests for each language skill. Language skills refer to listening, speaking, reading and writing skills.

1. Listening skill was administered by having students listen to a story “The Weekend Camp” and depicted their understanding of the story on their drawings which was then scored using rubrics with the help of my research assistants.

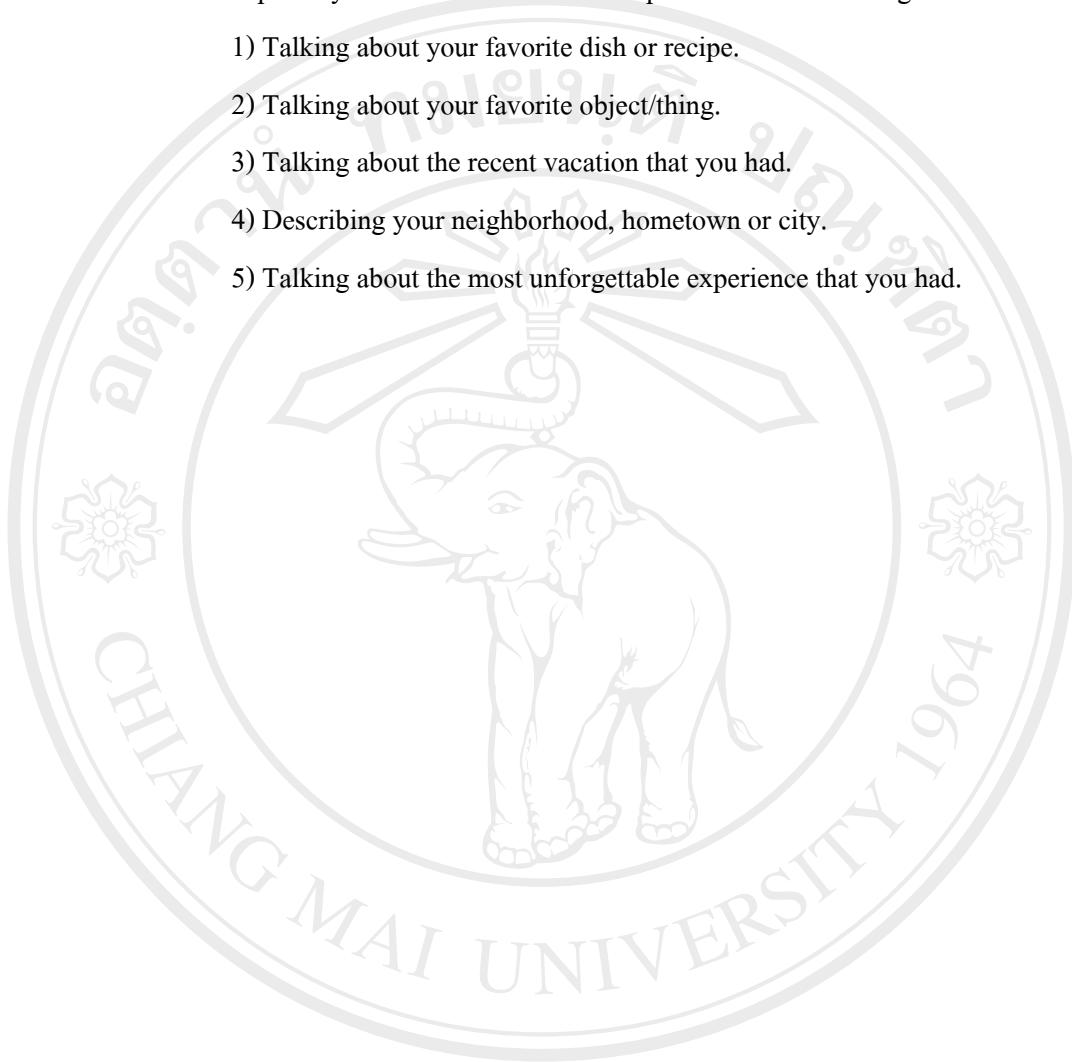
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Table 2 Listening Skill Rubric

Categories	5	4	3	2	1	Score
Communication	The artwork contains all the required (100%) information and details of the story.	The artwork contains 90% of the required information and details of the story.	The artwork contains 70% of the required information and details of the story.	The artwork contains 60% of the required information and details of the story.	The artwork contains 50% of the required information and details of the story.	
Sequence of Events and Details	The details and scenes are well-organized.	The details and scenes of the story are organized.	The details and scenes of the story are less organized.	The details of the story are less organized and contain a few scenes.	The details are less organized, and scenes aren't in order.	
Comprehension	The artwork shows very good understanding of the story. Setting and the concept are well depicted.	The artwork shows good understanding of the story. Setting and concept are depicted.	The artwork shows fair understanding of the story. Setting and some of the concept are depicted.	The artwork shows some kind of understanding of the story. Setting and concept are a little depicted.	The artwork shows little understanding of the story. Setting and little concept is depicted	
Creativity	The artwork is very creative, attractive, colorful, neat and clean.	The artwork is creative, attractive, colorful, neat and clean.	The artwork is fairly creative, attractive, colorful, neat and clean.	The artwork is somewhat creative attractive, colorful, neat and clean	The artwork is a little creative, but less attractive, colorful, neat and clean.	
TOTAL						

2. Speaking skill was administered by having students choose a topic from the list given and talked about the topic that they had chosen. The speaking skill was scored using rubrics with the help of my research assistants. The topics were the following:

- 1) Talking about your favorite dish or recipe.
- 2) Talking about your favorite object/thing.
- 3) Talking about the recent vacation that you had.
- 4) Describing your neighborhood, hometown or city.
- 5) Talking about the most unforgettable experience that you had.



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Table 3 Speaking Rubric

No.	Criteria	1	2	3	4	Score
1	Vocal Expression-Expressiveness, Clarity and audibility (Voice and distinctness of the articulation and pronunciation)	Monotonous, poor articulation and can't be heard.	Some variation, generally clear and audible.	Enthusiastic, clear throughout and audibility dropped a couple of times.	Energizes the audience with enthusiasm, precisely clear and audible throughout.	
2	Physical Expression-Eye Contact (Degree to which the speaker maintains eye contact with the listener/-s)	Avoids eye contact.	Some eye contact.	Much eye contact.	Involves audience with eye contact.	

Table 3 (Continued)

Organization-Order, Focus and Transitions (Sequencing of main points within the message, ideas and details are related.)	No order, unclear focus and no transitions	Some order, clear focus and some transitions.	Good Order, focus, ideas are well related and good transitions	Effective order, audience never loses sight of the speaker's focus and effective transitions	
Support and Elaboration-Reasoning, Illustrating, Exemplifying, and Clarifying (Clarity and use of the reasoning process and the way the speaker works with each idea).	No support and reasoning clear.	Some elaboration and reasoning clear.	Good elaboration and support and reasoning clear and somewhat effective	Full and effective elaboration, reasoning clear and effective	
TOTAL					

3. Reading skill was administered by having students answer a 30-item comprehension test, which was tried out with the independent group of the same category and level as my target group. Then it was evaluated for its reliability using Kuder -Richardson 20, which obtained an index of .84, which denoted that the test had high correlation coefficient value.

4. Writing skill was administered by having students choose a topic from the list provided and write about the topic that they had chosen. Students' writings were scored using rubrics with the help of my research assistants. The topics of the writing tests include the following:

- 1) Writing about the person that you like most.
 - (1) Who is he/she?
 - (2) Describe the person.
 - (3) Why do you like him/ her?
 - (4) How did the person influence your life?
- 2) Writing about the movie that you like most.
 - (1) What is the title of the movie?
 - (2) What is the story about? Describe the story.
 - (3) Why do you like it?
 - (4) How did this movie influence your life?
- 3) Writing about the happiest moment in your life.
 - (1) What was it?
 - (2) When did it happen?
 - (3) Describe what happened.
 - (4) Why do you think it was the happiest moment in your life?

Table 4 Writing Rubric

CRITERIA					
Category	Exemplary 4	Accomplished 3	Developing 2	Beginning 1	Score
Ideas/ Content	Ideas are clear, original and focused. Main idea stands out along with details.	Ideas are clear but information is general and predictable.	Ideas are clear and more information is needed.	Information is limited and text is repetitious. No central theme.	
Organization	Organization enhances the central theme. Sequencing is logical and transitions are smooth.	Organization is adequate and introduction needs more anticipation. Conclusion leaves no closure. Connections are fuzzy.	Organization is not clear. Introduction is present, but has no lead. Conclusion is present but not clear.	No clear direction with no lead or conclusion. Connections are confusing or incomplete.	

Table 4 (Continued)

Word Choice	Imagery and verbs are strong. Specific and accurate words are used to convey meaning.	Good word choice. Verb usage and descriptive words are used well.	Language is functional. Writer uses familiar words and few energetic verbs. Writer attempts colorful words.	Writer struggles with limited vocabulary. Language may be vague or redundant. Words are used incorrectly.	
Conventions	Grammar and usage are correct and contribute to clarity. Punctuation is correct and paragraphing adds to organizational structure.	Grammar and usage are correct. Paragraphing may create problems. Spelling and punctuation are correct.	Some usage, grammar, or paragraphing problems exist. Spelling and end-of-sentence punctuation are almost always correct. Internal punctuation may be incorrect or missing.	Errors in grammar and usage affect meaning. Paragraphing is missing or does not relate to organization of text. Frequent spelling errors. Punctuation is often missing or incorrect.	
				Total	

5. Reflection paper. The reflection paper was in the form of a questionnaire.

It was used to monitor and to keep track of students' progress and development in learning and in performing specific tasks given to them. The reflection contained details of the procedure on how they did a specific task from beginning to end, what problems they encountered, how they solved the problem/s step by step, what they learned from the problem/s they encountered and how the task helped improve their learning of the English language were described. The reflection questionnaire was written in Thai in order to derived accurate responses from the students. Students' answers were then translated, categorized and summarized. The reflection was composed of the succeeding questions:

- 1) How did you begin doing your project?
- 2) What did you do?
- 3) Who helped you?
- 4) What were your sources of information or details?
- 5) What were the problems that you encountered?
- 6) How did you solve problems you encountered?
- 7) How did you feel about the problem?
- 8) What did you learn from the problem that you encountered?
- 9) Did the problems you encountered make you learn better?
- 10) What did you learn in doing the task personally, as partners or as a group?
- 11) Did this task make you learn better? Why?

Students' reflection papers were translated by my Thai research assistant. The summary taken from this instrument was utilized to describe students' development in their self-directed learning ability.

3. Data Collecting Procedure

3.1 Research Design

To examine whether the approach to be applied could make a difference, the first objective was formulated to compare students' English language skills which are listening, speaking, reading and writing before and after the target group was engaged in multiple

intelligences-based activities. The experimental one group pretest/posttest design was employed because this approach could only determine and answer the objectives formulated on this research. Quantitative method is used to monitor and present students' improvement in this study.

Pretest	X	Posttest
L1	X	L2
S1	X	S2
R1	X	R2
W1	X	W2

L1 stands for listening pretest

L2 stands for listening posttest

S1 stands for speaking pretest

S2 stands for speaking posttest

R1 stands for reading pretest

R2 stands for reading posttest

W1 stands for writing pretest

W2 stands for writing posttest

The reflection paper, which was characterized by a series of questions to guide students on their account and description of their self-directed learning development was written each time students accomplished their task reflecting their process of learning, how they accomplished their tasks, and solved problems they encountered. This was used to explore and describe students' growth and development in their self-directed learning ability.

The researcher undertook the following processes in conducting this research:

1. Pretests on listening, speaking, reading and writing were conducted to determine students' English language skills proficiency before implementing the lesson plans using developed rubrics with the help of my research assistants.
2. Multiple intelligences-based lesson plans were implemented with the target group.

The instruction was carried out for 35 periods. Students' performance was observed during instructions and tasks were scored using the developed criteria or rubrics after the completion of each task. After each performance task, students wrote a reflection paper stating the details of the

process on how they did the task to evaluate their self-directed learning. Reflections were written in Thai language in order for the students to express themselves accurately, vividly and freely.

3. Posttests on listening, speaking, reading and writing were conducted, and the results of each skill were compared to the results of the pretests.
4. The results of the English language skills pretests/posttests were then analyzed, summarized, evaluated and presented.

4. Data Analysis

The data in this research were analyzed by using percentage, mean and standard deviation.

- 1) Pretests and posttests of listening, speaking, reading and writing skills were compared using mean score, standard deviation and percentage.
- 2) Self-directed learning reflections of students and observation were translated with the help of a research assistant, categorized, interpreted, summarized and presented in a narrative report describing the process and progress of the students' self-directed learning ability.