

การพัฒนารายวิชาภาษาอังกฤษเชิงวิชาการตามแนวคิดการเรียนรู้แบบบูรณาการเนื้อหา
และภาษาเพื่อเสริมสร้างทักษะการอ่านและการเขียนของนักศึกษาปริญญาตรี

นายบุรุษต์ ภูคอกไม้

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาครุศาสตรมหาบัณฑิต
สาขาวิชาการสอนภาษาอังกฤษเป็นภาษาต่างประเทศ ภาควิชาหลักสูตรและการสอน
คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

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ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
เป็นแฟ้มข้อมูลของนิสิตเจ้าของวิทยานิพนธ์ที่ส่งผ่านทางบัณฑิตวิทยาลัย

The abstract and full text of theses from the academic year 2011 in Chulalongkorn University Intellectual Repository (CUIR)
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DEVELOPMENT OF AN ENGLISH FOR ACADEMIC PURPOSES COURSE
USING CONTENT AND LANGUAGE INTEGRATED LEARNING
APPROACH TO ENHANCE READING AND WRITING
SKILLS OF UNDERGRADUATE STUDENTS

Mr. Burajt Phoodokmai

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Education Program in Teaching English as a Foreign Language
Department of Curriculum and Instruction
Faculty of Education
Chulalongkorn University
Academic Year 2011
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Thesis Title DEVELOPMENT OF AN ENGLISH FOR ACADEMIC
PURPOSES COURSE USING CONTENT AND LANGUAGE
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READING AND WRITING SKILLS OF
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บุรุษต์ ภูดอกไม้: การพัฒนารายวิชาภาษาอังกฤษเชิงวิชาการตามแนวคิดการเรียนรู้แบบบูรณาการเนื้อหาและภาษา เพื่อเสริมสร้างทักษะการอ่านและการเขียนของนักศึกษาปริญญาตรี. (DEVELOPMENT OF AN ENGLISH FOR ACADEMIC PURPOSES COURSE USING CONTENT AND LANGUAGE INTEGRATED LEARNING APPROACH TO ENHANCE READING AND WRITING SKILLS OF UNDERGRADUATE STUDENTS). อ. ที่ปรึกษาวิทยานิพนธ์หลัก: อ.พันธุ์ ดร.ราชน มีศรี, 184 หน้า.

การวิจัยนี้มีจุดประสงค์เพื่อศึกษาการพัฒนารายวิชาภาษาอังกฤษเชิงวิชาการตามแนวคิดการเรียนรู้แบบบูรณาการเนื้อหาและภาษา กลุ่มตัวอย่างเป็นนักศึกษามหาวิทยาลัยราชภัฏอุดรธานีที่ลงเรียนภาษาอังกฤษเชิงวิชาการเป็นวิชาบังคับ ภาคเรียนที่ 2 ปีการศึกษา 2554 จำนวน 37 คน เครื่องมือที่ใช้ในการวิจัยคือแบบทดสอบผลสัมฤทธิ์ทางการเรียน หน่วยการสอนและแผนการสอนแบบสังเกตการณ์การเรียนรู้ และแบบสอบถามความคิดเห็นของผู้เรียน วิเคราะห์ข้อมูลโดยใช้สถิติภาคบรรยายและการวิเคราะห์หาข้อมูลโดยหาค่ามัชฌิมาเลขคณิต ส่วนเบี่ยงเบนมาตรฐาน การทดสอบค่า t-test ความถี่และค่าร้อยละผลการวิจัยพบว่า 1) การพัฒนารายวิชาภาษาอังกฤษเชิงวิชาการตามแนวคิดการเรียนรู้แบบบูรณาการเนื้อหาและภาษาเสริมสร้างทักษะด้านการอ่านและการเขียนของผู้เรียนโดยมีคะแนนเฉลี่ยหลังการทดลองมีค่าประสิทธิภาพของการเรียนการสอนสูงกว่าคะแนนก่อนการทดลองอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 2) การพัฒนารายวิชาภาษาอังกฤษเชิงวิชาการตามแนวคิดการเรียนรู้แบบบูรณาการเนื้อหาและภาษาเสริมสร้างการมีส่วนร่วมกับกิจกรรมในห้องเรียนของนักศึกษาเพิ่มมากขึ้น จากแบบสังเกตการณ์การเรียนรู้ นักศึกษามีส่วนร่วมในกิจกรรมเป็นอย่างมากในขณะที่แบบสอบถามความคิดเห็นต่อการเรียนตามแนวคิดการเรียนรู้แบบบูรณาการเนื้อหาและภาษาพบว่านักศึกษามีเจตนาที่ดีต่อการเรียน การวิจัยนี้ยืนยันว่าการพัฒนารายวิชาภาษาอังกฤษตามแนวคิดการเรียนรู้แบบบูรณาการเนื้อหาและภาษานั้นช่วยให้ให้นักศึกษาปรับปรุงทักษะด้านการอ่านและการเขียนและเสริมสร้างการมีส่วนร่วมกับกิจกรรมในห้องเรียนเพิ่มมากขึ้น

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KEYWORDS: CONTENT AND LANGUAGE INTEGRATED LEARNING /
ENGLISH FOR ACADEMIC PURPOSES / READING AND WRITING SKILLS

BURAJT PHOODOKMAI: DEVELOPMENT OF AN ENGLISH FOR
ACADEMIC PURPOSES COURSE USING CONTENT AND LANGUAGE
INTEGRATED LEARNING APPROACH TO ENHANCE READING AND
WRITING SKILLS OF UNDERGRADUATE STUDENTS. ADVISOR:
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The objectives of this research were to develop an English for Academic Purposes course (EAP) using CLIL approach. The participants were 37 undergraduate students studying at Udon Thani Rajabhat University and enrolled in English for Academic Purposes as a required course in semester 2, academic year 2011. The instruments used in this research were the achievement test, a unit/lesson plan, observation form, and learning log. The data were analyzed using qualitative and quantitative statistics using arithmetic means scores, standard deviation, t-test, frequency, and percentage. The findings of the study revealed that: (1) The developed course of EAP using CLIL approach enhanced the students' reading and writing skills as evidenced by the average scores on the post-test of the Achievement test being significantly higher than the pre-test of the Achievement test scores at the significant level of 0.05, and (2) The developed course of EAP using CLIL approach enhanced students' engagement in classroom activities as evidenced by the observable checklists of each stage which showed the students' engagement in classroom activities significantly increased according to the frequency of time on level 3 (students engaged in the classroom activities most of the time). Additionally, learning log found that students had positive attitude towards EAP course using CLIL approach. These findings confirm that the developed course using CLIL approach helped improve students' reading and writing skills, and also increasingly enhanced the students' engagement in classroom activities.

Department: Curriculum and Instruction Student's Signature

Field of Study: Teaching English as a Foreign Language Advisor's Signature

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CHAPTER I

INTRODUCTION

Background of the Study

The importance of English as a world language, the technological advance and educational reform envisaged by the new Thai Constitution are key determinants for new developments for English language teaching and learning in Thailand in this decade. The role of English in Thailand is quite essential as it is in many other developing countries. New technology and the application of the Internet have resulted in a major transition in terms of education, business, science, and technological progress, all of which demand high proficiency in English. Currently, the era of globalization, the world has been easily accessible via the use of English as a lingua franca in such communication, and is accordingly regarded as an international language (Crystal, 1997).

English language teaching in Thailand has not prepared Thais for the changing world. Thailand will lag behind in the competitive world of business, education, science and technology if the teaching and learning of English is not improved. Here are some comments concerning the importance of English and the problems of English language teaching in Thailand. Dr. Rom Hiranyapruet, Director of Thai Software Park, stated that English is as crucial to the domain of information technology as other infrastructures. Thais have high proficiency in technology but because of our below average English competence, we cannot make much progress in terms of science and technology. (Wiryachitra, 2001)

What has caused the difficulties in English language teaching and learning in Thailand especially in the primary and secondary schools? According to Biyaem, 1997, the teachers and learners face the following difficulties: For teachers, there are many obstacles such as: too many students in a class (45 – 60), insufficient English language skills and teaching methods, inadequately equipped classrooms and educational technology. As for the learners, they think that English is too challenging for them to be competent because of some difficulties: lack of opportunity to use English in their daily lives, unchallenging English lessons, the textbooks are not attractive to them, and lack of responsibility for their own learning.

According to the interview and questionnaires conducted in the needs analysis for this research proposal, among the problems concerning the English courses conducted by the Language Center, Udon Thani Rajabhat University, are the different of learning styles, their background knowledge of English skills, the unit topics interests, and their preference of classroom activities. Most students found many difficulties learning English even though they have been studying English for many years before coming to the university. The problems are, for example, their reading comprehension and writing skills are quite low. Therefore, the problems will be considered to solve their problems based on the university context.

Required by the university undergraduate curriculum, most of undergraduate students from the different majors of Udon Thani Rajabhat University must enroll in certain English courses in order to collect at least 12 credits in the foreign languages field before they complete their bachelor degree. The objectives are to equip the students with a good command of foreign languages for their career paths, to make

the students have four basic skills of language: listening, speaking, reading and writing, for future higher education and use English or other foreign languages as a means of communication in a daily life. Accordingly, the courses are normally designed for learners to integrate different English skills in order to communicate via peer communication or specific contexts. Reading and writing are the most focused skills, respectively, by the Language Center at Udon Thani Rajabhat University.

At the undergraduate level, students have encountered several problems in acquiring a second or foreign language and certain content areas in their classes. Consequently, the Language Center is seeking ways to develop insufficient English language skills of the students who are now learning English at Udon Thani Rajabhat University. However, most of the students do not achieve the satisfactory level of reading comprehension at the end of the course as shown by the evaluation via reading comprehension test, not to mention writing (Wolff, 2005). There are three levels of comprehension in reading: literal, interpretative, and applied level.

From the preliminary study, when English courses are provided by the Language Center, students found out that the contents in the textbook are not interest and relevance to attract their attention when taking the English courses. In addition, the teaching approach applied in classroom, mostly grammar-translation with lots of drills and practices, needs to be changed and apply an effective one which encourages students learn language effectively in the instructional process of the English classes at Udon Thani Rajabhat University. So, the redesign of the course might be a better solution for the mentioned problems that might support students to learn better and achieve their goal in the end. Also, the teaching approach that can be integrated in the

course can possibly prove more effective. In order to teach English as a foreign language (EFL) effectively, an EFL teacher must apply one or more of the language teaching approaches into the language classroom context together with fostering some effective language learning strategies in order to maximize the learner's learning outcome in the target language (Garrido, 2000). What an effective EFL teacher would need to do is to identify the context and then select the best suited approach to be implemented in the language teaching (Garrido, 2000). The researcher in this study therefore has determined the plausible approach to the context of Udon Thani Rajabhat University, which is CLIL (Content and Language Integrated Learning).

CLIL is a dual-focused educational approach in which an additional language is used for the learning and teaching process in both content and language. It is interwoven and CLIL is content-driven, and this is where it both extends the experience of learning a language, and where it is become different to existing language teaching approaches. CLIL was adopted in 1994 (Marsh, Maljers and Hartiala, 2001) within the European context to describe and further design good practice as achieved in different types of school environment where teaching and learning take place in an additional language. The advantage of CLIL is that it offers the learner to access subject-specific vehicular language terminology, or otherwise preparing them for future studies and working life.

In this research, the researcher is trying to propose the redesign of the course based on CLIL approach as well as the lesson plan for learning and content or thematic learning and related acquisition of new knowledge, skills and understanding. The lessons must be interesting in order to balance the aspects of the content and

language. Students are supposed to use target language for language production and interactions with teacher and peers. According to English class in Thailand, the students will learn English effectively if they use more English and also they will enjoy learning more when the contents are familiar with their field of study. So, CLIL will be an effective approach in Thai context that helps them meet their goal and acquire both content and language at the same time. Here the teachers are required as the effective facilitators for language learning process (Coyle et al, 2010). In fact, all language learning is inspired by a specific need. In the context of the globalized world, these needs are changing and will influence our language teaching and course design. CLIL class is crucial and beneficial for learners since it is combined both content and language at the same time so that CLIL learning should involve a balance between subject and language (Bach, 2000).

Therefore, this study seeks to develop the course using CLIL concept of 4Cs framework into language teaching and learning of Udon Thani Rajabhat University with the courses offered by the Language Center using CLIL material to motivate and expose learners in the authentic situation. Among the gaps in the field of teaching reading and writing with the calls for solution for unsuccessful in motivating learners with the content or theme, CLIL will be used to teach the target content and reading and writing skills of the undergraduate learners in the EAP courses required by Udon Thani Rajabhat University. The researcher will explore the motivation level whether it will be enhanced significantly by implementing CLIL lesson and investigate the achievement level of reading and writing skills of the learners who study with CLIL

implementation. The result should provide some implications for CLIL adoption in language teaching in the future.

Research Questions

1. To what extent does the developed course using CLIL approach enhance the students' reading and writing skills?
2. To what extent does the developed course using CLIL approach enhance the students' engagement in classroom activities?

Objectives of the Study

1. To develop an EAP course using CLIL approach to enhance the students' reading and writing skills.
2. To develop an EAP course using CLIL approach to enhance students' engagement in classroom activities.

Statement of Hypotheses

A unit plan development in EAP course using CLIL approach is crucial process of planning a unit of course. Connecting the 4Cs into an integrated whole is fundamental to planning. For example, exploring how cognitive elements interconnect with content will determine the type of tasks which will be planned. Similarly, relating cognition to communication will demand careful consideration of classroom activities to ensure that learners not only have access to the content language, but also to the classroom language needed to carry out the tasks. The leading principle of CLIL is integrating language teaching with the teaching of other subjects. Similar to content-based Instruction (CBI), students learn contents of different subjects through the medium of a foreign language and simultaneously develop their language skills

(Brinton, Snow & Wesche, 1989). When a language is used as the medium of receiving new information and it is practiced in real communicative situations, language learning becomes more meaningful and more efficient than if it consists of studying isolated aspects of the language (Curtain & Martinez, 1990; Richard & Rogers, 2001). The hypotheses for this study are set as follows:

1. After students have been taught reading and writing regarding EAP course using CLIL approach, the students' reading and writing skills will be improved.
2. After students have been taught reading and writing regarding EAP course using CLIL approach, the students' engagement in classroom activities will increase.

Scope of the Study

The scope of the study includes population and variables.

Population and samples:

1. Population: the first year students of Udon Thani Rajabhat University.
2. Samples: the first year students majoring in Biotechnology from the Faculty of Science, who enrolled an EAP course in the second semester, academic year 2011.

Variables:

1. Independent variable is the developed course using CLIL approach.
2. Dependent variables are 1) the students' reading and writing skills, 2) the students' engagement in classroom activities, and 3) the purposive sampling.

Definition of terms

The terminologies employed in the study were as follows:

1. *English for Academic Purposes (EAP)* is a pre-sessional course which is designed to improve the students' reading and writing skills in English to the level required for entry into an English –medium university or college.

2. *CLIL (Content and Language Integrated Learning)* is an approach with content, communication, cognition, and culture in the learning process by introducing new ideas, content, and concepts using the target language as the medium of communication with the objectives of preparing students to acquire reading and writing in the target language while using the context of any subject matter so that students learn the language by using it within the specific context.

3. *Reading and Writing Skills* are the students' ability to read and understand in English where the content is about science and to write in English with the different forms of structures introduced. The students' reading and writing skills as English achievement will be pre-tested and post-tested before and after the implementation of the developed course using CLIL approach.

4. *Students* refer to the first year undergraduate students of Udon Thani Rajabhat University from the Faculty of Science, who enrolled the required courses of the Language Center, Udon Thani Rajabhat University, Udon Thani province.

5. *The developed course* refers to the redesign and development of an English for Academic Purposes course using CLIL (Content and Language Integrated Learning) approach.

6. *Students' Engagement* is an active interaction and participation of the students in class activities on the developed course using CLIL approach and the observation form as a checklist of observable behaviors is used to check the students' engagement.

Significance of the Study

The study will develop the course using CLIL approach in designing, planning and developing a unit plan and lesson plan in EAP course. In this study, the ultimate goal of the EAP pedagogy will derive from CLIL approach to improve the students' language proficiency, especially, reading and writing skills. Engagement level of the students enrolling in the EAP course using CLIL approach and investigation of the achievement level of reading and writing skills of the students will be explored. The implications for the developed course using CLIL approach will be discussed as well for the benefits of classroom instruction.

CHAPTER II

LITERATURE REVIEW

This section will explore CLIL and review of literature of the following topics:

1. Course Development

- 1.1. How is a course be developed?
- 1.2. What is an EAP course?

2. Content and Language Integrated Learning (CLIL)

- 2.1. What is CLIL approach?
- 2.2. Aims of CLIL in EFL classroom

3. Reading and Writing Skills in EAP course using CLIL

- 3.1. Reading Skill in EFL classroom
- 3.2. Writing Skill in EFL classroom
- 3.3. Integrated Reading and Writing Skills in CLIL classroom

4. Students Engagement in Classroom

5. Previous Research and Studies on CLIL

1. Course Development

Graves (2000) stated that designing a language course has several components. The classic models of curriculum design as well as more recent model agree on most of the components, although they may subdivide some of them and give them slightly different names. These components comprise setting objectives based on some form of assessment; determining content, materials, and method; and evaluation.

1.1. How is a course be developed?

Course design is a system in the sense that planning for one component will contribute to others; change to one component will influence all the others. If you are clear and articulate about content, it will be easier to write objectives. If the content changes, the objectives will need to change to reflect the change to content, as will the materials and the assessment plan. If the plan is clear for assessing students learning, it will help developer design appropriate materials. If the approach is changed to assessment, it will have an impact on the content, the objectives, and so on.

Graves (2000) constructed the process of course design for school curriculum and development with several components as follows:

➤ Defining the context

The context is a key factor in answering the questions about the learner's needs or interests in the units of the subjects. It is important to define what the course developer knows about the context in order to know how to answer the question. The same is true for designing a course, the course developer needs to know as much as possible about the context in order to make decisions about the course. The defining the context involves people, physical setting, nature of course and institution, teaching resources and time.

➤ Articulating beliefs

To understand the beliefs come from the past experience and the beliefs about learning and teaching including education and its discourse. The course in Gee (1990) states sense of the way one learn to think, speak and act and what one learn to value in given setting such as a school. The process of designing a course is one way in which you can learn to understand and articulate your beliefs, because those beliefs provide

a basis for making choices of a course design. The articulating beliefs involves in the language, society or social context, learning and learners, and teaching.

➤ **Conceptualizing content**

The process of conceptualizing content is a multifaceted one which involves: thinking about what the teacher wants the students to learn in the course, given who they are, their needs, and the purpose of the course. The teacher should make decisions about what to include and emphasize and what to drop including organizing the content in a way that will help you to see the relationship among various elements so that you can make decisions about objectives, materials, sequence and evaluation. The conceptual framework content focuses on the language, learning and learners and social context.

➤ **Formulating goals and objectives**

Goals and objectives are the hardest aspects of course design including planning the process. Goals are a way of putting into words the main purposes and intended outcome of the course. The objectives are the different points of the course the students are focused. A goal state an aim of the course and objectives are statements about how the goals will be achieved. Brown (1995) points out that one of the main differences between goals and objectives is there level of specificity since the objectives are in the hierarchical relationship to goals. Goals are more general and objectives more specific.

➤ **Assessing needs**

Needs assessment is systematic and ongoing process of gathering information about students' needs and preferences, interpreting the information, and then making course decisions based on the interpretation in order to meet the needs. It is an

orientation toward the teaching learning process which views it as a dialogue between people: between the teacher and administrators, parents, other teacher for example. It assumes that needs are multi-faceted and changeable. When needs assessment is used as an ongoing part of teaching, it helps the learners to reflect on their learning, to identify their needs, and to gain a sense of ownership and control of their learning. It establishes learning as a dialogue between people.

➤ **Organizing the course**

Organizing a course is deciding what the underlying systems will be that pull together the content and material in accordance with the goals and objectives and that give the course a shape and structure. Organizing a course occurs on different level: the level of course as a whole; the level of subsets of the wholes: units, modules, or strands within the course; and then individual lessons. Organizing a course involves five overlapping processes: 1) determining the organizing principles that drives the course; 2) identifying units, modules, or strands based on the organizing principles; 3) sequencing the units; 4) determining the language and skills content of the units; 5) organizing the content within each unit.

➤ **Developing materials**

Material development is the planning process by which a teacher creates units and lessons within those units to carry out the goals and objectives of the course. That means the process of making the syllabus more specific. Material development takes place on a continuum of decision-making and creativity which range from being given a textbook and a timetable in which to cover it. The material is developed are influenced by the beliefs and understanding about teaching and learning language as the learners apply to the particular course in its particular context. Therefore, the

process of materials development involves deciding how to put your teaching principles into practice.

➤ **Designing an assessment plan**

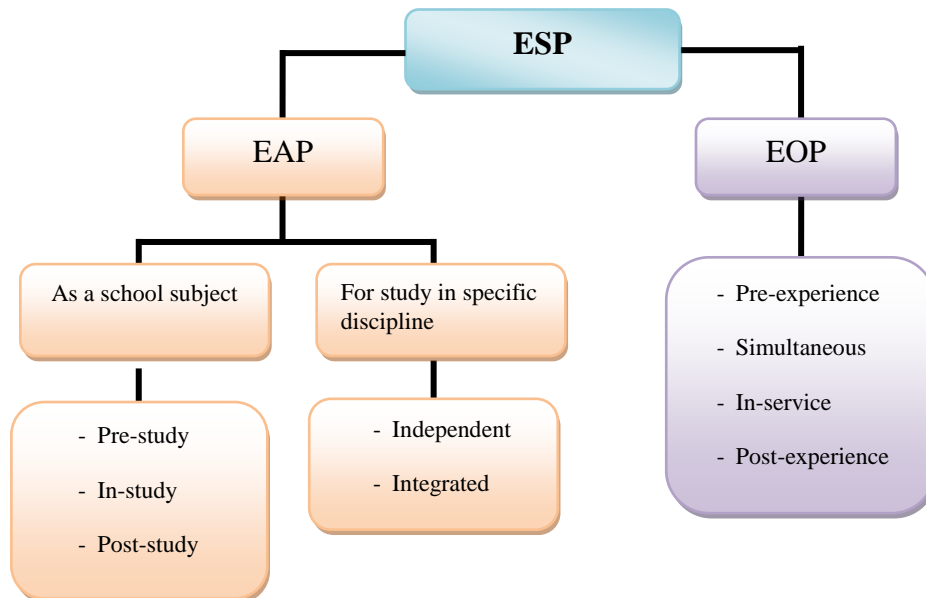
Assessment plays three interrelated and overlapping roles in course design.

The first is assessing needs, the second is assessing students' learning, and the third is evaluating the course itself. Assessment can be both formative and summative. Formative assessment takes place as the course is in progress and provides information about how well the students are doing and what they have achieved. Summative assessment is done at the end of the course and provides information about the students' overall achievement as well as the overall effectiveness of the course.

1.2. What is an EAP course?

There are two main divisions which help to distinguish ESP situations: English for Academic Purposes (EAP) and English for Occupational Purposes (EOP). The division is generally represented in a tree diagram as in Figure 2.1 below (taken from Robinson, 2001:3).

Figure 2.1: Stems of ESP proposed by Hutchinson, T & A. Waters (1987:17).



EOP involves work-related needs and training, it is not for academic purposes. According to Dudley-Evans and St. John (1998), it includes “professional purposes in administration, medicine, law and business, and vocational purposes for nonprofessional in work or pre-work situations”. Unlike EOP, English for Academic Purposes (EAP) refers to any English teaching that relates to a study purpose (Dudley-Evans and St John, 1998).

It is taught generally within educational institutions to students needing English for their academic courses. Since this study is specifically looking at an EAP course for law students, we will not go further in discussing on EOP but will only look at EAP in more details.

English for Academic Purposes (EAP)

EAP is an academic field as well as an area of English language teaching, and there is a significant body of research into its effective approaches, methods of analysis of the academic language needs of students, and analysis of the linguistic and discourse structures of academic texts (Hamp-Lyons, 2001). Yet, the concerns of EAP are not specific to English only, many students focus on achieving higher level of academic success through English (Robinson, 2001). Hence, the students are eventually learning language strategies for the academic context of a particular discipline, for instance economics, along with its disciplinary culture that include language structure, vocabulary, the particular skills needed for the subjects, and the suitable academic conventions.

Goodwin (2001) states that an EAP course “must focus on students’ academic needs”. She also claimed that a number of needs analysis have investigated the academic demands placed on university students. Thus, the needs analysis will be conducted to provide raw data about the learners’ needs and the learning needs within the given context.

From its early beginning in the 1960s, EAP has undergone several phases of development. It should be pointed out that EAP is not a monolithic universal phenomenon. It has developed at different speeds in different countries. Therefore, the following summary of its history and development is rather general in its focus (Hutchinson & Waters, 1987).

1. Register analysis

This stage took place mainly in the 1960s and the early 1970s (Hutchinson & Waters, 1987) and the work of Register Analysis largely focused on the Scientific and

Technical English. The assumption was that certain grammatical and lexical forms were more frequently used in scientific and technical writings than in General

English (Dudley-Evans & St. John, 1998). Thus, the aim was to identify these forms and produce teaching materials that took these forms as their syllabus (Hutchinson & Waters, 1987). As a result, materials produced under the banner of Register Analysis concentrated on a restricted range of grammar and vocabulary instead of language use and communication (Dudley-Evans & St. John, 1998). This weakness and the attempts to rectify it led to rhetorical and discourse analysis.

2. Rhetorical and discourse analysis

The assumption of this stage was that the difficulties which students encountered arose from the unfamiliarity with the use of English. Consequently, their needs could only be met by a course that developed the knowledge of how sentences were combined in discourse to make meanings (Allen & Widdowson, 1974, cited in Hutchinson & Waters, 1987). The aim, therefore, was to identify organizational patterns in texts, which then formed the syllabus of the EAP course (Hutchinson & Waters, 1987).

3. Analysis of study skills

The assumption of this stage was that underlying all language use there were common reasoning and interpreting processes, which, regardless of the surface form, enabled us to extract meaning from discourse (Hutchinson & Waters, 1987). Therefore, the teaching of language in itself was not sufficient and the thought processes should be addressed. In this stage, EAP teachers focused on the teaching of study skills and assumed that these skills learnt through exercises could be transferred to students' own specific academic studies (Dudley-Evans & St. John, 1998).

4. Analysis of learning needs

The concern in each stage outlined so far is with describing what people do with language. But our concern in EAP is not with language use, but with language learning. We cannot assume that describing what people do with language will enable them to learn it. Therefore, a valid approach to EAP must be based on an understanding of the processes of language learning (Hutchinson & Waters, 1987). This brings us to the next stage of EAP development: the learning-centered approach. It involves considering the process of learning and student motivation, working out what is needed to enable students to reach the target, exploiting in the EAP classroom skills which students develop from their specific academic study and taking into account the fact that different students learn in different ways (Dudley-Evans & St John, 1998). In the future, an all-encompassing view of EAP is expected to develop much further: “Academic literacy” will continue to be applied to the complex set of skills, not only to those relating to the mastery of reading and writing. More attention will be paid to EAP at pre-tertiary levels. A concern with the English language skills of non-native English speaking academics will develop (Hamp-Lyons, 2001).

2. Content and Language Integrated Learning (CLIL)

2.1 What is CLIL approach?

The term CLIL is the acronym for Content and Language Integrated Learning. The term CLIL was first introduced in 1994 by David Marsh, who expanded its implications in 1996 after Finland became a new state member of the European Union (Lucietto, 2008). Marsh (2002) defined CLIL as an umbrella term which encompasses any activity in which a foreign language is used as a tool in the learning of a non-

language subject, where both language and subject have a joint role. One of the first statements by the European Commission regarding European Cooperation in CLIL is the 1995 Resolution of the Council which refers to the promotion of innovative methods and in particular, to “the teaching of classes in a foreign language for disciplines other than languages, providing bilingual teaching”. It stated that languages are also the key to knowing other people. Proficiency in languages helps to build up the feeling of being European with all its cultural wealth and diversity and understanding between the citizens of Europe. CLIL enables students from primary level, secondary level, vocational or from higher studies to study different subjects in a foreign language.

2.2. Aims of CLIL in EFL classroom

There are some of academic experts addressed about CLIL. Thus the aims of CLIL are as follows:

1. Students are able to achieve learning outcomes in a content subject other than the foreign language at the same level as others learning this content subject in their first language.

2. Students’ learning outcomes in this foreign language are able to extend beyond those who just have language classes.

CLIL can be delivered by language teachers or by content teachers and often their background determines their planning of CLIL lessons, which can be more language driven or more content driven.

On the other hand, Dalton-Puffer (2007) restricts the scope of CLIL to educational settings and classrooms where the environment provides opportunities for acquiring learning as opposed to explicit practices. The definition for the term under

consideration is CLIL refers to educational settings where other than the students' mother tongue issued as a medium of instruction.

Frigols et al (2008) claimed that CLIL offers an innovative teaching mode, which is going to provide students with suitable skills for the global age, in which people are facing new ways of living and working that affect their lives in many different aspects such as financial, political, cultural and language, which are all interconnected. Moreover, Frigols stated that CLIL reflects on a small scale, an example of fusion: fusion of content and language learning. The concepts of globalization and CLIL seem interconnected for CLIL practitioners.

Integration, interconnection, and fusion call for mutual understanding. Advocates of CLIL suggest that the use of CLIL fosters cultural understanding in addition to the learning of the target language and is thus seen as a drive for internationalization.

The CLIL Project, far from being a mere definition (Lucietto, 2008), also offers a number of dimensions which have been embraced by countries outside the EU (Bebenroth and Redfield, 2004). The Annual Conference for Teachers of English organized by FAAPI (Federación Argentina de Asociaciones de Profesores de Inglés) proposed the topic "Using the Language to Learn – Learning to Use the Language" as the core issue of their 2008 event. Such subject matter is closely connected to the realms of CLIL. The regional association, APISE, which was in charge of organizing this conference present the dimensions of CLIL;

The Culture Dimension

- Build intercultural knowledge & understanding
- Develop intercultural communication skills

- Learn about specific neighbouring countries/regions and/or minority groups
- Introduce the wider cultural context

The Environment Dimension

- Prepare for internationalization, specifically EU integration
- Access International Certification
- Enhance school profile

The Language Dimension

- Improve overall target language competence
- Develop oral communication skills
- Deepen awareness of both mother tongue and target language
- Develop plurilingual interests and attitudes
- Introduce a target language

The Content Dimension

- Provide opportunities to study content through different perspectives
- Access subject-specific target language terminology
- Prepare for future studies and/or working life

The Learning Dimension

- Complement individual learning strategies
- Diversify methods & forms of classroom practice
- Increase learner motivation

In CLIL contexts, clear benefits have been found for the effect of intensive instruction on oral production in an ESL context (White and Turner, 2005), but studies in foreign language learning contexts are still scarce. Jiménez-Catalán et al (2006) analyzed written productive vocabulary by EFL primary school learners and

found more lexical richness and sophistication in CLIL learners but did not find a higher number of tokens or types. In the analysis of the overall oral proficiency of a small sample of secondary students, Ruiz de Zarobe (2007) showed that CLIL learners present better results in receptive tasks than in productive tasks; however, as the author argues, the slight difference in the number of hours between the CLIL and non-CLIL groups (210 hours) may not be enough for any effects of CLIL to emerge. Celaya (2006a) claims that the clearest benefit of CLIL is that learners are able to achieve higher levels of proficiency at an earlier age than in “regular” classes. Similarly, in the comparison of CLIL and non-CLIL groups in Catalonia and the Basque Country Ruiz de Zarobe and Celaya (2009) conclude that CLIL has a positive impact on the productive skill of writing in both settings.

According to Dalton-Puffer and Nikula (2006), Austria is not the only country where CLIL has been adopted. This has become a common practice in many European countries such as Finland. In this context, needless to say, the rationale lies in the conviction that learners, regardless of the CLIL settings, will develop their communicative competence if they use the target language as a medium for learning since they will engage in building different communicative events and social practices by working collaboratively and with a goal that goes beyond the explicit linguistic knowledge.

The CLIL approach introduces four guiding principles, known as the 4Cs from Coyle (1999): **Content, Communication, Cognition and Culture**, all equally significant in CLIL programs. The CLIL approach is communicative in nature and language is “used as a tool in the learning of a non-language subject in which both language and the subject have a joint role” (Marsh, 2002). The target language comes

“as the vehicle through which subject matter content is learned rather than as the immediate object of study.” Both content and language are explored in a CLIL lesson, which according to Coyle should combine the four Cs. Coyle suggests that it is through progression in the knowledge, skills and understanding of the content, by engagement in associate cognitive processing, interaction in the communicative context, and a deepening awareness and positioning of cultural self and otherness that learning takes place (Do Coyle, 1999). Coyle (2005) offers an analysis of what the 4Cs are and their implications as follows:

4 Cs Implications;

Content Subject or the project theme, provide the basis for learning to occur through acquisition of knowledge, skills and understanding.

Communication Language is used as “a conduit for communication and for learning” which goes beyond the grammar system and aims at interaction. The principle of learning to use a language and using language to learn is applicable in this context.

Cognition Learners are challenged “to think and review and engage in higher order thinking skills in which learners construct their own understanding. Teachers are suggested to make use of the three domains’ within Bloom’s taxonomy (1956).

Culture Studying through a foreign language is vital to fostering the understanding of others and cultural awareness. Adapted from Coyle (2005:3)

The curriculum model with the four Cs- content, communication, cognition and culture created by Coyle (2006 cited in Coyle 2007), puts culture at the core of the framework; “the 4 Cs framework espouses socio-cultural theory where social construction of knowledge and culturally embedded learning permeate the whole”

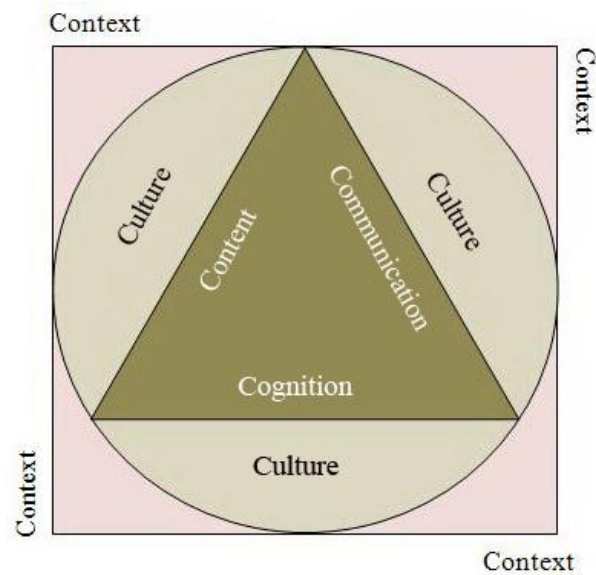
Crandall (1994) states that students cannot develop academic knowledge and skills without access to the language in which that knowledge is embedded, discussed, constructed, or evaluated. Nor can they acquire academic language skills in a context devoid of academic content.

Course development of EAP tends to integrate content and language learning using the 4Cs framework as a conceptual map for understanding CLIL. This framework integrates four contextualized blocks: content-subject matter, communication-language learning and using, cognition-learning and thinking processes and culture-developing intercultural understanding and global citizenship. Therefore, it takes account of integrating content learning and language learning within specific contexts and acknowledges the symbiotic relationship that exists between these elements. It suggests that effective CLIL takes place as a result of this symbiosis, through:

- Progression in knowledge, skills and understanding of the content
- Engagement in associated cognitive processing
- Interaction in the communicative contexts
- Development of appropriate language knowledge and skills
- The acquisition of a deepening intercultural awareness, which is in turn brought about by the positioning of self and otherness.

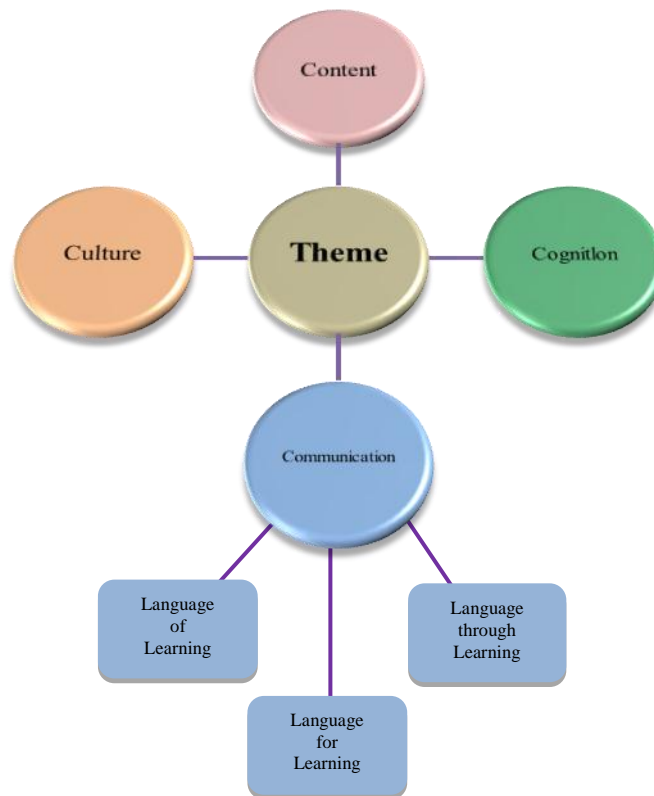
The 4Cs framework is the heart of CLIL in planning the unit, as shown in Figure 2.2

Figure 2.2: The 4Cs Framework



In the 4Cs framework communication involves CLIL teachers and learners in using and developing language of learning, for learning and through learning, which marks a shift in emphasis from language learning based on linguistic form and grammatical progression to a more “language using” one which takes account of functional and cultural imperatives (Coyle et al, 2010). Also, she pointed out the importance of learning in CLIL class is designed as the mind map template to determine the instruction framework, which is illustrated in Figure 2.3.

Figure 2.3: Mind Map Template

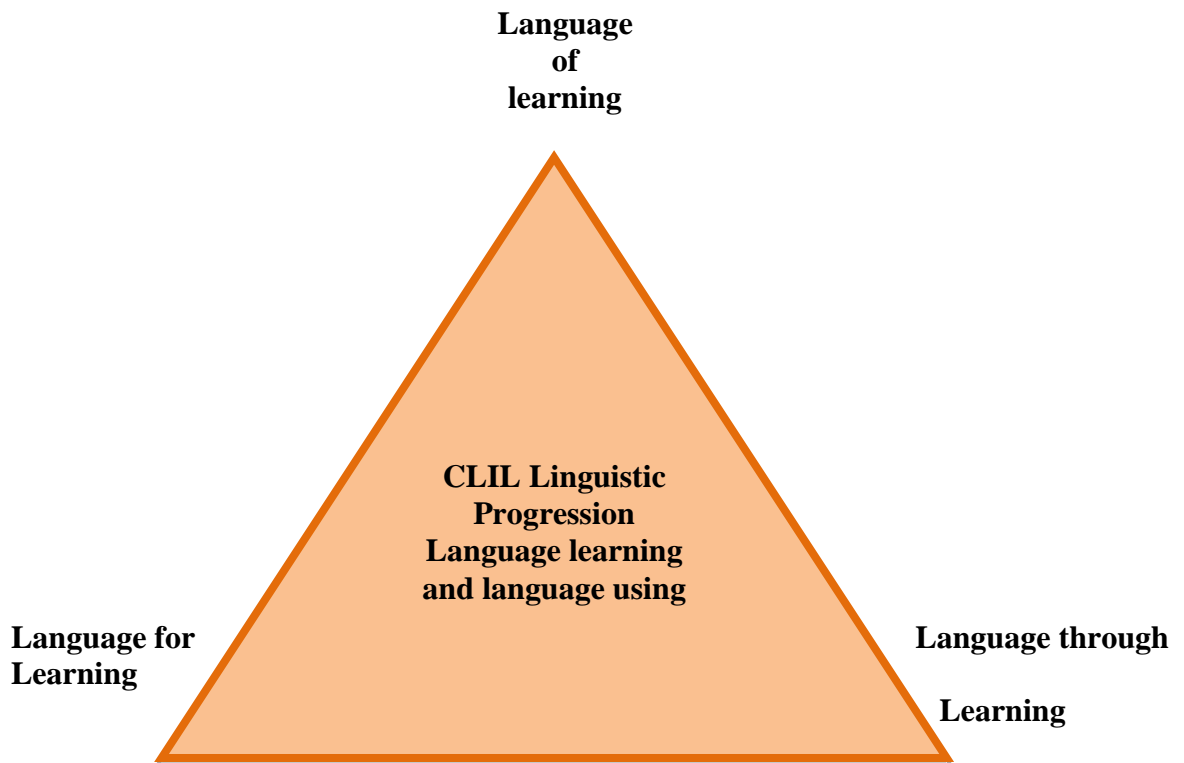


Coyle (2010) also constructed the mind map template to build up an overview of an example unit, including with the mind map in Figure 2.3. This process does not go into the detail of individual lesson planning. Lesson plans require the complete map to provide the stimulus for task design and sequencing across different lessons of a unit depending on theme, approaches and other relevant teaching and learning process based on CLIL lesson.

As for the communication, is linked with the content and cognitive demand using the Language Triptych has showed in Figure 2.4. It demands an awareness of different types of language used for different purpose; for language teachers it

requires an alternative approach to language learning and language using without rejecting successful classroom practice.

Figure 2.4: Language Triptych



Source: Coyle, D., Hood, P., Marsh, D. (2010). *CLIL – Content and Language Integrated Learning*. Cambridge: Cambridge University Press.

Language of learning explores what language learners will need to access new knowledge and understand the language use when dealing with the content.

Language for learning is the most crucial element for successful CLIL, as it makes transparent the language needed by learners to operate in a language environment where the medium language is not their first language.

Language through learning, the language is linked to cognitive processing, it is important to make use of opportunities (both spontaneous and planned) to advance learning and to encourage learners to articulate their understanding, which in turn advance new learning.

3. Reading and Writing Skills in EAP course using CLIL

3.1 Reading Skill in EFL classroom

In the field of reading ESL and EFL, many scholars have defined reading in several ways. For instance, Urquhart and Weir (1998:22) specify that “reading is the process of receiving and interpreting information encoded in language form via the medium of print”. Moreover, Grabe and Carrell (2002:234) elaborate the definition of reading as follows:

A definition of reading requires some recognition that a reader engages in processing at the phonological, morphological, syntactic, semantic and discourse levels, as engages in goal setting, text-summary building, interpretive elaborating from knowledge resources, monitoring and assessment of goal achievement, making various adjustments to enhance comprehension, and making repairs to comprehension processing as needed. Moreover, these processes are carried out by the integration of activated processes and resources (in working memory) under intense processing-time constraints.

Similarly, contends that (2005), “reading is a complex, multifaceted pursuit requiring the continuous deployment and integration of multiple operations”

Additionally, Ajderson and Banerjee’s (2002:84) definition of reading is beyond decoding skill. It is relative to not only the readers but also to the text. They

assert that “Reading is an interaction between a reader with all that the reader brings with him/her- background knowledge, affect, reading purpose, intelligence, first language abilities and more and the text, whose characteristics include topic, genre, structure, language (organization, syntax, vocabulary, cohesion) and so on”.

The Method of Teaching Reading

To encourage students to use effective strategies when reading in a second or foreign language, there are many educators proposed the method for teaching reading such as KWL (What I Know?, What I Want to know?, and What I Learned?), SQ3R (Survey, Question, Read, Recite, and Review) or PQRST (Preview, Question, Read, Self-recitation, Test) method. Barnett (1989) proposed a reading method that can develop simple exercises to elicit information via targeted strategies. The reading method contains four phases that are pre-reading, while reading, post-reading and follow-up.

Barnett pre-reading activities were designed to activate relevant background knowledge, encourage students to predict content, give necessary cultural information, stimulate student interest, and provide them with a purpose for reading the text. Activities that Barnett suggest include brainstorming about idea and vocabulary that will likely appear in the text, using titles, photos, and graphics to predict text topics and activate background knowledge, developing vocabulary through semantically-based activities, reviewing text types to help students identify text structure, practicing skimming and scanning, and encouraging students not to read word by word.

During reading, exercises help students acquiring reading strategies, improve their command of the linguistic features of the target language, and decode difficult

passages. At this stage, activities should help students to learn to infer word meanings from context, give them practice in recognizing cognates, prefixes, suffixes and word families, grammatical structures, and function words, and teach them when and how to use a dictionary effectively. Students can also identify items or facts which are confusing by reading.

The purpose of post reading exercise is to verify that students can create a final summary of what they have learned, state how to use the information they get, revisit text for clarification and respond to questions. Types of comprehension check activities will vary depending on the text type and the amount of comprehension required by the reading objectives the instructor has established. For example, Barnett points out that one reads classified ads in order to buy or sell something, a bus schedule to see bus arrival and departure times, and a short story for pleasure or to gain a new perspective on life.

Barnett's follow-up activities provided students with opportunities to go beyond the text either by learning strategies that they can then apply to other texts, and by developing student creativity and high order thinking skills. To help students learn to transfer strategies from one text to another, Barnett suggested that instructors provide follow-up readings to which previously learned strategies can be applied. Follow-up activities also encourage students to think creatively and critically about what they have read. Such activities might include comparing one's own point of view with that presented in the text, recreating the theme of a story in a new context, and writing about a topic from a variety of points of view.

Reading comprehension

Block, Gambrell and Pressley (2002) noted that reading comprehension is an interactive process involving the reader, the text and the context. During the reading process, the reader attends to the text based information. At other times the reader may relate to the text in terms of his or her own experiences with a very different understanding, sometimes reflecting more literally the text, reader interpretations and strongly biased by the surrounding social environment. Besides, reading comprehension is defined as process of extracting and constructing meaning through interaction and involvement with written language. The reading comprehension process includes three dimensions: the reader, the text and the activity. Comprehension should go beyond simply understanding the explicit message that is being conveyed by the author. To truly comprehend text is to make connections between the information in the text and the information in the reader's head, to draw inferences about the author's meaning, to evaluate the quality of the message, and possibly even to connect aspects of the text with other works of literature.

Reading comprehension is defined almost universally as the ability to understand information in a text and interpret it appropriately. Keiko (2005) described reading comprehension as a meaning-construction process, involving integral interaction between text and reader. Grabe and Stoller (2002) define reading comprehension as the ability to draw meaning from the printed page and interpret this information appropriately.

Reading comprehension is an interactive process involving the reader, the text, and the context. Comprehension requires an ability to relate the text materials to the reader's own knowledge. The reader plays a very active role in constructing meaning

based on his purpose in reading, background knowledge, and the overall setting (Rumelhart, 1977 & Carrell, 1985).

According to the definitions of reading comprehension above, the researcher defines reading as an interactive process between the readers' interpretation and the text. In reading process, the reader will have interaction between the texts. Furthermore, how much the reader can interpret from the text depending on the reader's background knowledge and the ability in guessing from the context. The meaning the reader gets from the text may not be exactly the same as the meaning the writer of the text wished to convey. Likewise, the meaning that one gets from a text may be different from that of other readers reading the same text. Readers use their varying resources to differing when they read. Thus, reading comprehension differs from one reader to another.

Barnett (1988) examined reading strategies used by students learning French and concluded that there is a relationship between strategy use and reading comprehension level. Students who were taught strategies were able to read through context better and understood more than those who did not think they used such strategies.

Fielding and Pearson (1994) state that research shows repeatedly that comprehension can be taught and that instruction in comprehension strategies is especially effective. Quality strategy instruction should include authenticity of strategies. Instruction should focus on the flexible application of the strategy rather than a rigid sequence of steps, and should externalize the thinking processes of skilled readers. Teachers can help learners to become aware of what strategies students use when reading, of what other strategies are available to them, and of how to use

strategies selectively (Anderson, 1991). Comprehension instruction must take into consideration the ways students learn, the types of interaction in which they participate, and the text they read (McMahon & Raphael, 1997).

Developing strategic reading is an important way to enhance comprehension ability. The main objective of CLIL materials development in reading comprehension is to enhance undergraduate students' reading comprehension ability as well as their use of learning materials in class.

Reading Assessment

Since the teacher's role in the English reading class changed from a lecturer to a facilitator of learning and mixed with the role of assessor. Reading assessment is undergoing substantial changes in order to reflect changes that have taken place in teaching reading. Teachers observe and encourage the process of students learning as it occurs during class time, and teachers simultaneously evaluate the products of students' learning. Aebersold & Field (1997) proposed the assessments in the ESL/EFL reading class encompass a variety of measures, from the most formal to the most informal as follows:

Multiple-choice questions

The choices in a multiple-choice question consist of a correct answer and a variety of response called distracters. These distracters need to be carefully formatted. In addition, constructing multiple-choice questions demands considerable time, thought, and skill.

Vocabulary tests

Vocabulary tests may help the teacher identify general problems with

understanding key words, but they do not test comprehension, and they lead students to think that learning words is the only key to good reading.

Cloze tests

Students are asked to supply words that have been deleted from a reading text. The fifth, sixth, or seventh words are usually deleted. A cloze test determines the key words that students are to recall. In addition, cloze tests have proved useful and valid in making whole language assessments, and they are especially useful for determining the difficulty of reading passage.

Completion Tasks

Completion of sentences is another form of comprehension testing that demands recall and writing as well as comprehension. The simplest versions of this type of test the student may use the words from the original passage to complete the sentence; in more complex versions the students must interpret or analyze the text before completing the sentence.

Some informal activities serve to give teachers feedback on students' comprehension and mastery of skills, but do not become part of the students' grades. However, in nowadays, most of teachers attempt to use various assessment to assess students' ability. Richard (1997) divided two methods of assess reading: alternative methods of assessing reading and traditional methods of testing reading. The examples of alternative methods of assess reading are journals, portfolios, homework assignment, teacher assessment through observation, self-assessment, peer assessment.

3.2 Writing Skill in EFL classroom

Alkan (2007) stated that people who teach English or composition would know that writing is one of the most difficult skills to teach and improve in language education. And many times teacher send up with students who does not like to write or/and have very poor writing skills as he was one of the very rare students who actually enjoyed writing, so, he wanted to show others that from the very beginning of the students' education if teachers can use enjoyable creative writing activities in their classrooms they can make a long term change in their students' academic life.

Pidchamook (2003) mentioned that English writing ability is the ability in which writers can organize and put sentences fit into the purpose of them. It is thus the process of combining their thought and knowledge which interpret what writers want to say.

Many researchers say about the components of English writing ability which conclude into two mains types as follows.

1. Focusing on content

Because writers need to organize content to suit with types of essays, it is very important then to raise EFL student writers' awareness of how crucial the organization of the content is so that it would aid readers to understand the text undoubtedly.

Better writers not only have strategies for correcting local problems such as word choice, grammar, and punctuation, they also deal with overall content and meaning of their writing by adding, deleting, or reorganizing larger chunks of discourse (Brookes & Grundy, 1990). Writers can set the main ideas of what they are talking about and then find supporting idea supported by stating the fact, giving

details, or giving examples for four or five sentences in which markers or transitional words can help writers in making related sentences (Hyland, 2003). However, they have to be careful that these sentences will not go out of the main idea. Writers need to have more knowledge on presenting text so that readers are impressed and understand the text in depth. If it does not relate, it might make them so confused that they do not believe what the writers are trying to say (D'Angelo, 1980).

In short, focusing on content is making every sentence connecting together to the whole one which contributes to be understandable text. Readers will not waste time with run on sentences which do not help them get the meaning clearly, also sometimes can make them misunderstand with the text.

2. Focusing on form

The standard which makes writers compose the essay correctly is accuracy of sentences consisted of vocabulary, grammar, and mechanics. Choosing the wrong form can refer to incorrect meaning or change to another implication (Pidchamook, 2003). Thus, mistakes of form are important components of learning a language. The mistakes should be corrected in order to assist students in producing the target language more accurately (Selinker, 1992; Truscott, 1996; Ferris, 1999). Vickers and Ene (2006) agreed that the mistakes need to be revised. They studied grammatical accuracy and student autonomy in advanced writing. Their finding concluded at the end that explicit self-correction seems to be effective in terms of gains in grammatical accuracy. It is important to raise students' awareness of the learning process and of the system of the target language. Although the present study does provide evidence that engaging students in an autonomous correction task allows for greater grammatical accuracy, it does not provide evidence that such as autonomous task

raises student awareness of the learning process. Furthermore, Sheppard (1992) disagreed with doing error correction. He claimed that error correction is harmful because it diverts time and energy away from the more productive aspects of writing.

Writing Assessment

To evaluate the students' English writing ability, the writing assessment process is necessary to familiar with. The assessment of writing is not simply of setting exams and giving grades. However, score and evaluative feedback also contribute to the learning of individual students and to the development of an effective and responsive writing course. As a result, an understanding of assessment procedures is necessary to ensure that teaching is having the desired impact and that students are being judged fairly (Hyland, 2003).

Brown (2004) pointed out that teachers consider assessing student's writing ability need to be clear about their objective or criterion. Furthermore, each objective can be assessed through a variety of tasks. Thus, assessment provides data that can be used to evaluate student progress, identify problems, suggest instructional solutions, and evaluate course effectiveness. When the teacher assesses students' actual production of written texts in a second or foreign language, three approaches have traditionally been used to rate learners' writing (Bailey, 1998). However, each of the approaches is based on the scoring criteria used rather than by the stimulus material, the task posed, or the learner's response.

Scoring criteria is where the quality of each essay is judged in its own right against some external criteria, such as coherence, grammatical accuracy, contextual (Bailey, 1998).

3.3 Integrated Reading and Writing Skills in CLIL classroom

To promote reading and focusing on writing are considered highly important in CLIL methodology (Wolff, 2005). It is important to concentrate on the integration of reading and writing, as this approach has major implications for the CLIL classroom.

Integrated reading and writing activities brings benefits to the learner with respect to both content learning and language learning processes. As for language gains, processing information and constructing new texts based on prior reading helps students develop overall target language competence - in particular, it builds up reading and writing skills, as well as discourse skills and helps students expand their vocabulary.

The advantages of integrated reading and writing activities in reference to content learning are as follows: reading texts from a given discipline provides information that can be later used in written production, and therefore contributes to revision and consolidation of content material. Furthermore, the necessity of selecting information in the writing process helps students develop critical thinking skills.

There is also one important quality of these kind of activities – writing becomes text-responsible. Carson and Leki (1997) define this category of a writing task as an assignment in which “the writers are responsible for demonstrating an understanding of the source text, they must produce *text-responsible* prose based on content acquired primarily from text.” The sources from which the students are expected to acquire and possibly display knowledge include books, articles, lectures, etc. The fact that content correctness of the produced text becomes evaluated is

absolutely essential for content learning – text responsible writing not only helps to revise material, but it also requires accuracy, precision and correctness. Carson and Leki (1997,) furthermore stress that there are disappointing consequences if writing is separated from text responsibility, especially on English for Academic Purposes (EAP) courses where content is treated only as a material for practicing some rhetorical skills, reasoning skills or problem-solving skills. In the CLIL classroom this condition can be easily fulfilled as there is a dual focus on both language and content learning, and as CLIL teachers usually have both content and language competences.

To sum up: text-responsible writing is beneficial for students in reference to content learning as well as language learning processes, and it may be assumed that the CLIL classroom provides excellent opportunities for such an integration of reading and writing tasks.

4. Students Engagement in EFL Classroom

Engagement in the learning process is essential for academic success. Because of English language learners' different English proficiency levels, teachers often struggle to find ways to have them actively participate in their learning. This helps teachers learn, reflect on use, and adapt instructional strategies so that English language learners are engaged in the instructional process.

In recent times, the notion of student engagement has been used to describe positive attitudes towards learning and the learning environment. It is proposed that investigating L2 learning in terms of student engagement will provide a view that is conceptually aligned with the theories and methods of L2 learning and instruction. This assertion is examined in the following section.

The notion of student engagement

The engagement of students can be viewed from several perspectives. For example, from a research perspective, Fredricks, Blumenfeld and Paris (2004) classified the research on engagement three ways:

1. Behavioural - positive conduct, involvement in academic, social or school activities, and in extra-curricular activities;
2. Emotional - positive and negative reactions to teachers, classmates, academics and school; and
3. Cognitive - motivation to comprehend complex ideas and master difficult skills.

From a teacher perspective, the results of phenomenon graphic investigation conducted by Harris (2008) suggested that teacher conceptions of student engagement could be categorized as follows:

1. "Participating in classroom activities and following school rules" [Behaving];
2. "Being interested in and enjoying participation in what happens at school" [Enjoying];
3. "Being motivated and confident in participation in what happens at school" [Being motivated];
4. "Being involved in thinking" [Thinking];
5. "Purposefully learning to reach life goals" [Seeing purpose]; and
6. "Owning and valuing learning" [Owning]" (p. 65).

Significantly, the categorization by Harris (2008) is similar to the Fredricks, Blumenfeld and Paris (2004) classification. The similarities centre on three constructs: student compliance with classroom and school expectations of conduct behaviour; positive attitude towards the psycho-social environment; and motivation towards learning. Generally, other conceptions of engagement are consistent with one or more of these three constructs. For example, Glanville and Wildhagen (2007) explained engagement at school as “a student’s behavioural and psychological involvement in the school curriculum”. Hughes and Zhang (2006) defined classroom engagement to be indicated by “student effort, attention, persistence, and cooperative participation in learning”. Kenny, Blustein, Haase, Jackson and Perry (2006) portrayed school engagement as “positive attitudes toward school, teachers, classmates, and academic learning”. Janosz, Archambault, Morizot and Pagani (2008) saw school engagement as characterising “both academic (achievement, motivation, involvement in learning activities) and social integration within the school (social isolation/ rejection, quality of student-teacher relationships, participation in extracurricular activities)”.

There is one of the current trends of the engagement in classroom which indicates the importance of student engagement characteristics. Jones (2009) stated that data on learner engagement as part of the Learning Criteria is focused on results or school performance. It does not include measures about education processes and the engagement of students during regular class instruction. Other instruments can be used for measurement of the level of student engagement through administrative classroom walkthroughs, peer reviews, or teacher and student reflection. Process data

is important in determining if you are making progress, but you must first commit to focusing on results in learner engagement.

Student Engagement Characteristics

Many classroom participation walkthroughs, which the teacher monitors and checks the engagement of students during instruction. Students participate in all sessions of classroom activities. These methods blend measures of student engagement with measures of instructional practice. Although this is a good way to view effective learning, sometimes we need to pay more attention simply to how well students are engaged rather than on what kind of instruction is being delivered or how the classroom is set up. In this way, we become more focused on the learner rather than on the teacher.

The Student Engagement Walkthrough Checklist that follows examines the degree to which students are exhibiting engaging behaviors, regardless of what is being taught. This observation is meant to help reach agreement in defining high degrees of student engagement.

As administrators and instructional supervisors conduct classroom walkthroughs, they can use the checklist to rate the level of student engagement in each of the categories. The first part is based on direct observation of students and includes these criteria: positive body language, consistent focus, verbal participation, student confidence, and fun and excitement. The second part of the checklist requires more than direct observation. It requires talking to students to determine more about their mental engagement. These criteria include: attention to individual needs, clarity of learning, meaningfulness of work, rigorous thinking, and performance orientation.

There are several questions for each criterion to gauge the level of student engagement. Each criterion is rated on a scale from “very low” to “very high.” An overall level of student engagement can be determined using the compilation of the criteria ratings. Teachers can use this checklist as a reflective tool to examine themselves and determine the level of engagement in their classrooms. Sometimes it is difficult for teachers to evaluate themselves. However, sharing this checklist with them can help to establish common definitions of highly engaged students, reflect on practices, and share instructional ideas that contribute to increased levels of student engagement.

Student Engagement Characteristics: Part 1

First, the observer must examine the following set of characteristics of the engagement. These direct observations include:

Positive body language -Students exhibit body postures that indicate listening and attention to the teacher and/or other students. Eye contact, head position, leaning forward or backward, and positions of arms all indicate a student’s level of interest and attention.

Consistent focus - Students are focused on the learning activity with minimum disruptions. Consider these questions regarding student behavior during the entire observation: Are students focused on the learning experience? Does their attention waiver because of lack of interest, lack of knowledge of how to proceed, frustration, or some outside distraction?

Verbal participation - Students express thoughtful ideas and answers. They ask questions that are relevant or appropriate to learning. Student participation is not passive; it involves sharing opinions and reflecting on complex problems.

Student confidence - Students exhibit confidence to initiate and complete a task with limited coaching or approval-seeking and can actively participate in team-based work.

Fun and excitement - Students exhibit interest and enthusiasm and use positive humor.

Student Engagement Characteristics: Part 2

The second part of the observation requires conversations with students to gather details about the degree to which they are engaged in a learning experience. There are five strategies for measuring perception of engagement. For each aspect, questions are provided to encourage conversations with students.

Individual attention -Students feel comfortable in seeking help and asking questions.

Clarity of learning -Students can describe the purpose of the lesson or unit. This is more comprehensive than describing the activity based on the lesson of the day.

Meaningfulness of work -Students find the work interesting, challenging, and connected to learning.

Rigorous thinking -Students work on complex problems, create original solutions, and reflect on the quality of their work.

Performance orientation -Students understand what quality work is and how it will be assessed. They also can describe the criteria by which their work will be evaluated.

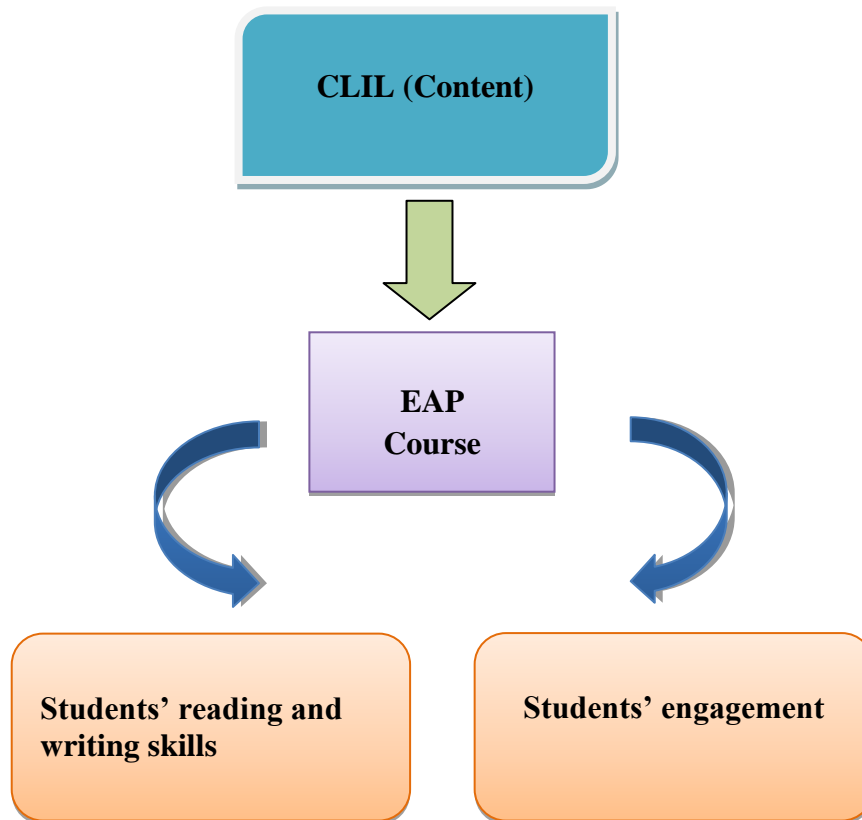
5. Previous Research and Studies on CLIL

CLIL is a new learning approach to Thailand. So, not many findings were cited about it. However, CLIL in Thailand was the result of an initiative by the British Council in partnership with the Ministry of Education following a conference Future Perfect – English Language Policy for the New Millennium in 2006 jointly organized by both organizations (Marsh, Wiriyaichitra & Mackenzie, 2008). The focus of CLIL was on the adoption of English as a medium of instruction for subjects rather than the language itself. The study is taken from April 2006 – December 2007, a small scale CLIL project was piloted in six schools in Bangkok. CLIL follows the Thai curriculum of 2001 and teaches Science only in English. The pilot CLIL approach was designed partly to investigate the possibility to transfer some positive features of the English Program (EP) across to non-paying students in the Thai-medium stream within a given school (Marsh, Wiriyaichitra & Mackenzie, 2008).

According to CLIL concept, content and language are integrated and become four contextualized building up to form a conceptual map for understanding in CLIL as the 4Cs framework (Coyle (2010)). The academic educator, Crandall (1994) stated that students cannot develop academic knowledge and skills without access to the language in which that knowledge is embedded, discussed, constructed, or evaluated. Nor can they acquire academic language skills in a context devoid of academic content. It means that the content or the language does not stand alone, students need learning the content and to convey the information using the medium language at the same time. In this research on CLIL, the researcher determined the research framework to describe the connection of CLIL approach to implement in the developed course of EAP, which is the pre-session course to prepare the students for

further study in specific academic knowledge and language need. EAP course is focused on reading and writing skills to help students acquire the knowledge and language with the appropriate materials and useful activities. Regarding to the previous research in EAP classroom using CLIL approach, Wolff (2005) determined the integration of reading and writing skills for undergraduate students and the results revealed that the specific contents helped students improve their target language competence. Therefore, the researcher will investigate how integrating of CLIL between content and language into the developed course will be effective and to develop the students' reading and writing skills and also to find out the level of students' engagement in classroom activities. So, CLIL content was implemented into an EAP course and also the connecting linked to both research questions of this study as a conceptual framework. The research framework is illustrated in Figure 2.5.

Figure 2.5: Research Framework



CHAPTER III

RESEARCH METHODOLOGY

This chapter discusses the research design and research methodology implemented in the study. The study aims to investigate the effectiveness of the developed course using CLIL approach to enhance reading and writing skills of science major freshman students at Udon Thani Rajabhat University. The description of context of study, research design, research procedure, research instruments, data collection, and data analysis are presented in this chapter.

Context of the study

Udon Thani Rajabhat University is one of the government higher educational institute with an approximation of 12,500 students. Their levels are from Bachelor to Doctoral degree. The university offers two types of English courses: elective courses and core courses. The Language Center provides students with both courses.

Population and Samples

The population for this study was the first year undergraduate students from the Faculty of Science of Udon Thani Rajabhat University and the samples were the students from the Faculty of Science, who enrolled in English for Academic Purposes (EAP) course in the 2nd semester of academic year 2011.

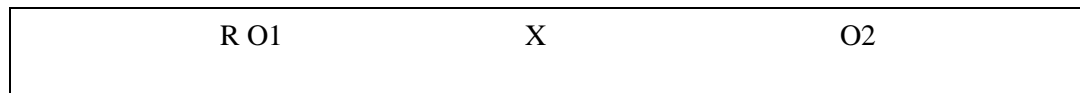
In this research, the EAP course was re-designed for the science major students using CLIL approach. Therefore, purposive sampling was used in this research. The samples were undergraduate students from Udon Thani Rajabhat

University. They enrolled in English for Academic Purposes course in the second of academic year 2011. There were 37 students consisted of 31 females and 6 males between the age of 18 and 20. Most of them are currently studying in Biotechnology as a major.

Research Design

A single group design in this research was conducted with a specific group of participants with pre-test and post-test experimental design as shown in Figure 3.1.

Figure 3.1: Research Design



R means the purposive sampling

O1 means Pre-test

X means the developed course using CLIL approach

O2 means Post-test

Research Instruments

There were two types of instrument in this study.

1. Research instrument

1.1 The Achievement Test was designed by the researcher and used as a pre-test and post-test for the experiment. The purpose was to assess the achievement of reading and writing skills of the students before and after the experiment. The test was validated by the experts using IOC and analyzed using KR-20 before the actual

experiment. The test consisted of two sections, reading and writing skills. There were 46 items with 60 points in total and 1.30 hours were spent for taking the test.

1.2 Needs analysis (questionnaire and semi-structure interview questions were designed) was used to investigate students' needs and interests of English study. The questionnaire consisted of 16 items including open-ended and close-ended questions, and the importance topics were composed of the general information, unit topic interest, background knowledge of English, and the most preference in four language skills. All topics were created with connection to CLIL in its 4Cs concept. The questionnaire was validated by the experts using IOC before the survey.

2. Instructional instrument

2.1 Unit plan and lesson plan were developed using CLIL approach to enhance reading and writing skills. The purpose was to implement in EAP course using CLIL approach for the experiment. A unit plan consisted of three lesson plans, which determined the aims of the unit or theme, criteria of assessment, teaching objectives using CLIL implementation in each lesson, learning outcomes, and materials and equipment. As for a lesson plan, it consisted of objectives, indicators, learning procedures, assessment and evaluation, and materials and equipment. Each lesson lasted 3 hours per week. The unit plan and lesson plan were validated by the experts using IOC to ensure their validity of the instruments.

2.2 Observation form was used by the teacher to enhance the students' engagement in classroom activities using CLIL approach. The purpose was to observe their engagement in classroom during the instruction of EAP course. The observation form consisted of the fifteen items of observable behaviors in classroom activities

based on CLIL's 4Cs framework. The students' behaviors item 1-4 were content, item 5-8 was communication, item 9-12 was cognition, and item 13-15 was culture. It was checked during the class by the instructor. Also, the video-recording was implemented during the class in order for the instructor to recheck the students' behaviors. Also, the video recording was implemented during the class especially the lesson 3. The observation form was validated by the experts using IOC before the experiment.

2.3 Learning log was a brief writing piece by the students after the end of each class about the classroom activities and the students' opinion toward EAP course using CLIL approach. The purpose was to investigate their feedback on learning an EAP course using CLIL approach. The learning log consisted of four open-ended questions. The teacher distributed it to the students to write in English at the end of each lesson. The learning log was validated by the experts using IOC to ensure that all questions linked to the learning course using CLIL approach.

Research Procedures

Figure 3.2: Research Procedures

Stage 1: Development of EAP course using CLIL approach
<p>Step 1. Explore and study the fundamental concepts and teaching procedures relating to CLIL approach</p> <p>Step 2. Conduct needs analysis</p> <p>Step 3. Construct the research instrument and instructional instruments</p> <p>Step 4. Validate research instrument and instructional instruments by a panel of experts</p> <p>Step 5. Revise research instrument and instructional instruments according to the experts' comments</p> <p>Step 6. Conduct the pilot study</p>
Stage 2: Implementation stage
<p>Step 1. Pre-test: EAP Achievement Test</p> <p>Step 2. Implementing the instruction</p> <p>Step 3. Post-test: EAP Achievement Test</p> <p>Step 4. Analyzing the data from EAP achievement test via t-test, observation form and learning log using statistical tools</p>

Stage 1: Development of EAP course using CLIL approach

Step 1: Explore and study the fundamental concepts and teaching procedures relating to the CLIL approach

Initially, the researcher studied the fundamental concepts and teaching procedures relating to CLIL approach from documents and related research: research journal, research articles, research documents, and theses on CLIL and other related issues.

Step 2: Conduct Needs Analysis

Needs analysis questionnaire was used to obtain students' interests and needs on English studies for the developed course (Appendix A). There were 16 items, which provided participants to answer the questions about their English background knowledge in term of reading and writing skills. The researcher gathered information and used the results from needs analysis to design the unit plan. Most questions were linked to 4Cs framework.

Students selected the Content or theme from Question 13, and they were asked to identify the topics of their interests. There were 10 topics provided for them to select. These 10 topics were adopted from the fundamental curriculum of science studies based on the Faculty of Science, Udon Thani Rajabhat University. The top 6 chosen topics were Biotechnology, Environmental problems, Disease, Cycle of life, Living organisms, and World energy.

Item 6-10 were designed based on Communication according to CLIL to find out which skill students think was the most difficult or important to them, and how much reading and writing skill were important to them. In addition, the students were asked to describe their English reading proficiency level. Most students chose the

second item which stated they could read simple sentences in English, but when they didn't know the vocabulary meaning, they won't be able to understand the whole sentence. For writing, most students also chose the second item which stated that they can write simple sentences in English, but there are many times that they cannot write what they want to say or express.

Item 5 and 14 were designed based on Cognition according to CLIL to let students create their own activities regarding thinking skills.

Item 15 and 16 were designed based on Culture according to CLIL where their learning style was chosen as a group work and their preference in learning behaviors.

Then the data from the questionnaire were analyzed using frequency and percentage. The researcher conducted needs analysis with science major students (Appendix B).

In conclusion, the findings from the needs analysis questionnaire were used to develop English for Academic Purposes (EAP) course using CLIL approach. The findings revealed that the students were most interested in the unit topic of biotechnology since it was familiar with the field of the study of the students and their topic interests would be suited them the most and thought they would learn better and easier through content and language. Most of students described themselves they can read simple sentences in English and write English words but not simple sentences.

Step 3: Construct the research instrument and instructional instrument

Based on the data from needs analysis, the six most interesting unit topics were Biotechnology, Environmental problems, Disease, Cycle of life, World energy, and Living organisms. These topics were further developed into 13 lessons as the course contents under 6 units (Appendix C). The thirteen lessons consisted of 1)

Global warming, 2) Pollution, 3) Climate change, 4) Water water!, 5) Frogs and toads, 6) Gene cloning, 7) GMO, 8) AIDS/HIV, 9) E. Coli disease, 10) Dinosaurs, 11) Life on the other planet, 12) Solar energy, and 13) Renewal energy. Each lesson lasted for 3 hours. The unit plan and the teaching procedures for each lesson plan were developed based on CLIL implementation using CLIL-4Cs framework: Content, Communication, Cognition, and Culture (Appendix D and Appendix E). Hence, course syllabus, (see Appendix F) and scope and sequence were also designed for the implementation process (Appendix G). The teaching procedures in each lesson included (a) warm up or introduction to content, (b) presentation or communication, (c) practice or cognition, and (d) production or culture. The researcher integrated PPP teaching techniques (presentation, practice, and production) to Coyle's CLIL 4Cs framework. The 4Cs framework was used as a guide as the steps of teaching were in ordered and all the elements of 4Cs connect well within the context. Therefore, the forth stages were designed on the lesson plan and sequenced of teaching stages as follow:

In the first stage of teaching for each lesson (introduction to content), the teacher started with warm up activity to allow students activate schema by watching the clip for a few minutes. After that, the students were asked a few questions about the unknown topic at the beginning to stimulate their background knowledge and also predict the topic. Then, they had brainstorming in group and discussed about a video clip. The teacher introduced the topic by showing some extra visuals. Then students were assigned to read the passage. At this stage the teacher had to ensure that the new content must be introduced according to 4Cs framework of CLIL approach.

At the presentation stage, the students worked in group (usually 6 groups) and then the teacher asked the questions for each paragraph of the passage to check their comprehension. The students were assessed from interaction among peers and with the teacher in answering questions and discussing about the reading texts. Therefore, communication was implemented in the process of language of learning, language for learning, and language through learning according to CLIL approach.

As for the practice stage, the teacher prepared the problem-solving tasks or exercises to assess their understanding of the reading passage. Then students exchanged their opinions among friends and with the teacher. In addition, students determined their own questions related to the reading text to make an argument or agreement. Therefore, cognitive process was employed into this stage based on CLIL approach regarding 4Cs framework.

In the last stage (production), the students were encouraged to build up their own awareness for the community and the environment as culture and responsibilities are the key needed for the CLIL approach. For example, in the Global Warming lesson, the students had to design the poster in the target language to contribute to the 4R (reuse, recycle, reduce, and respond) campaign to sustain the environment within their community (Appendix H).

The Achievement Test was designed to measure the students' achievement before (pre-test) and after (post-test) the course based on contents from the thirteen lessons to assess both the language and content in parallel model in accordance with CLIL approach. The test format consisted of both reading and writing sections, reading section was divided into four parts: part 1, part 3 and part 4A were multiple choices, part 2 was sequencing order and part 4B was filling True or False to the

correct statement. The writing section was divided into two parts: part 1 was re-writing complex sentences as grammatical structure and part 2 was a paragraph writing. The test lasted about 1.30 hours (Appendix I).

The observation form was designed to observe and report to see the students' engagement. The observation form was filled during the class by the instructor, which consisted of fifteen items of observable behaviors in classroom activities based on CLIL's 4Cs framework. Throughout the teaching procedure in each lesson plan, the students' behaviors item 1 to 4 were carried out in the warm up activity stage, item 5 to 8 were carried out in the presentation stage, item 9 to 12 were carried out in the practice stage, and item 13 to 15 were carried out in the production stage. The results would be explained (Appendix J).

The learning log was designed to investigate their feedback on whether they thought they had improved or engaged themselves more after instruction the developed course using CLIL approach. In order to study the findings from learning log analysis, the results were discussed about their opinions toward CLIL classroom. The learning log consisted of four open-ended questions items. The students will have to respond in English sentences 10 minutes before class dismissal. The key words from the answers would be analyzed via frequency and descriptive statistics. (Appendix K). The samples of learning log written by the students were shown in Appendix L.

Step 4: Validate research instrument and instructional instrument by a panel of experts

The Item Objective Congruence Index (IOC) were constructed and a panel of experts in English language instruction were evaluated the contents validity of needs

analysis questionnaire, the achievement test, a unit plan / lesson plan, observation form, and learning log.

As a result, the Index of Item Objective Congruence (IOC) was calculated by assigning scores to the answers as follows:

Congruent = 1

Questionable = 0

Incongruent = -1

IOC (Item-Objective Congruence Index)

$$IOC = \frac{(M - 1) S_i - S_i}{2N (M - 1)}$$

M = the number of objectives

N = the number of expert judges

S_i = the summation of scores for objective i

S_i = the summation of scores for total objectives except i

The result was revealed that IOC on all aspects in all research instruments and Instructional instruments: the achievement test, a unit plan / lesson plan, observation form, and learning log were greater than 0.50, they implied that all of them were acceptable for the experimental stage. In addition, the experts suggested very useful points to develop both research instruments and instructional instruments to be more effective. The experts' suggestions are in the next step. The value of IOC for the Achievement Test was presented in Appendix O.

The panel of experts was professors from Udon Thani Rajabhat University. For over 10 years, they have had experience in teaching and designing the English for

Specific Purpose courses such as EAP or EOP courses (Appendix M). Selection of experts was based on these criteria:

- 1) English teaching within the specific content
- 2) At least 10 years experiences of teaching English, and
- 3) Specialized in the field of teaching and good knowledge in curriculum

The researcher employed its criteria to calculate the checklists of all research instruments and instructional instruments. Item Objective Congruence Index can interpret into two ways, with higher than or equal to 0.5 considered acceptable for measure the objective (Appendix N).

4.1 Needs Analysis Questionnaire

The experts in English language instruction evaluated and suggested on the needs analysis questionnaire. After the needs analysis had been validated, over all the contents and objective of the questionnaire were acceptable by the experts but minor correction was suggested that some of the items were not relevant to the objective of needs analysis, so those items were advised to be taken of the survey.

4.2 The Achievement Test

The checklists were constructed and a panel of experts in English language teaching especially in an EAP course and EOP course evaluated and commented on the achievement test, which was designed separately with the answer sheet. The experts evaluated the contents of the developed course of EAP course based on CLIL approach and the sequencing of the contents. The contents of the test were accepted by the experts. The experts' suggestions are in the next step. The value of IOC for the Achievement Test was presented in Appendix O.

After the revision of the Achievement Test, a pilot study was carried out before the experiment, and was undertaken with 32 students who had the same characteristics in term of educational background and the field of the study as the sample group of experiment. In order to ensure the reliability of the proficiency test of developed EAP course using the Achievement test was calculated by Kuder-Richardson-20 formula (KR-20) after the pilot study. The result was at 0.67, which can be interpreted that the test was considered adequate for confirmatory purposes. Then the test was analyzed for the difficulty index (p) and discrimination index (r) of the test. The criteria for the difficulty index and the discrimination index were set as follows:

The difficulty index (p):

$p < 0.20$ = the item was difficult

$p = 0.20-0.80$ = the item was good in terms of its difficulty

$p = 0.81-0.94$ = the item was easy

$p \geq 0.95$ = the item was very easy

The discrimination index (r):

$r = 0$ = the item had no discrimination ability

$r \geq 0.19$ = the item had a low discrimination ability

$r = 0.20-0.29$ = the item had a fair discrimination ability

$r = 0.30-0.39$ = the item had a high discrimination ability

$r \geq 0.40$ = the item had a very high discrimination ability

According to the criteria, the test items of which difficulty indices (p) ranged between 0.20 and 0.80, and the discrimination indices (r) were equal or higher than

0.20 were chosen for the experiment. Therefore, all the items of the test were acceptable.

4.3 Unit plan and Lesson plan

The experts in English language teaching evaluated and suggested on the unit plan and lesson plan. On the unit plan, the experts evaluated the aims of the unit, criteria for assessment, teaching objectives, and learning outcomes. The experts who mostly specialized in English language teaching of EAP and EOP courses; English for Chemistry, English for Electronics, English for Information Technology, and etc. So, they had adequate knowledge in organizing and designing the unit planning and lesson plan as well. The experts were asked to rate in the evaluation form as to whether it was congruent with the objective using the checklists constructed by the researcher. As for the lesson plan, the experts evaluated the terminal objectives, enabling objectives, indicators, teaching procedures, activities, and materials. The experts were asked to rate in the evaluation form in order to ensure the congruence with the objective using checklists constructed by the researcher.

4.4 Observation Form

The fifteen item checklists of observable behaviors in classroom activities were evaluated by a panel of experts. The experts were asked to rate each item whether it was congruent with the objectives using the evaluation form constructed by the researcher.

4.5 Learning Log

A few questions of students' feedback after each lesson were evaluated by a panel of experts in English language teaching and suggested on the learning log.

The experts' validation of both research instruments and instructional instruments were illustrated in Table 3.1.

Table 3.1: Research Instruments Evaluation Form

Descriptions	Rating Experts			Results
	A	B	C	
1. Needs Analysis Questionnaire				
• Questions are clear and easy to understand.	1	0.67	1	Acceptable
• Questions are purposeful and support the study.				Acceptable
• Questions content are well constructed.	1	1	1	Acceptable
• The language use is appropriate for participants.	1	1	1	Acceptable
2. Achievement Test				
• Content allows students to demonstrate their knowledge.	1	1	1	Acceptable
• Contents are purposeful and support the study.	1	1	1	Acceptable
• Contents are well constructed.	1	1	1	Acceptable
• Sequencing of topics is well organized.	1	1	0.67	Acceptable
• Topics are appropriate for level of students.	1	1	1	Acceptable
• Variety of the tests is appropriate.	1	1	1	Acceptable
• Language use is appropriate for students.	1	0.67	1	Acceptable
3. Unit Plan / Lesson Plan				
3.1 Topic of the Unit and the lesson				
3.1.1 The topic of the lesson is appropriate and clear.	0.67	1	1	Acceptable
3.1.2 Topic of the lesson is organized effectively.	1	1	1	Acceptable
3.2 Objectives:				
3.2.1 The objectives are clear and concise.	1	0.67	1	Acceptable

3.2.2 Objectives are relevant and consistent with the content of the lesson.	0.67	1	1	Acceptable
3.3 Materials and worksheets				
3.3.1 The materials and worksheets are appropriate for the lesson.	1	1	1	Acceptable
3.3.2 The worksheets and materials are linked with the topics.	1	0.67	1	Acceptable
3.4 Teaching stages				
3.4.1 The stages of teaching are appropriately sequenced.	0.67	1	1	Acceptable
3.4.2 Stages of teaching are clear and effective.	1	1	1	Acceptable
3.4 Activities:				Acceptable
3.5.1 Activities are practical.				
3.5.2 Activities incorporate students work in various situations.	1	1	1	Acceptable
4. Observation Form				
• Language use is appropriate for the observation.	0.67	1	1	Acceptable
• Observable checklists are adequate measure students' engagement.	1	1	1	Acceptable
• Sequencing checklists are well organized.	1	0.67	1	Acceptable
• The checklists are all covered their engagements.	1	1	1	Acceptable
5. Learning log				
• Questions are appropriate for level of students.	1	0.67	1	Acceptable
• The questions encourage students to write effectively.	1	1	1	Acceptable
• Questions are useful and supportive the study.	1	1	1	Acceptable
• Questions are beneficial and meaningful to students.	1	1	1	Acceptable

Step 5: Revise research instrument and instructional instruments according to the experts' comments

The researcher revised the research instruments and instructional instruments according to the experts' suggestions for the following items.

5.1 The Achievement Test

The experts gave some suggestions for further revision of the achievement test; pre-test and post-test for EAP course. Some are listed as follows:

Expert A suggested that the instructions of the test was unclear, As a result, the researcher revised the instructions to be clearer.

Expert B and C suggested that the sequencing of the test is complexity and the contents are too difficult for the freshman according to their level and background knowledge. As a result, the researcher re-organized the course contents and revised some of difficult parts according to the experts' suggestions.

Lastly, Expert A suggested that the reading passage is too long and the items of the test are inadequate to recover whole passage of the text. These sessions of the test should be revised and reselect of the reading text because of its difficulty. As a result, the researcher studied the reading text and reselected the appropriate title for those sections. The experts' validation was illustrated in Table 3.1

5.2 Unit plan and Lesson plan

After the unit plan had been validated, the aims of the unit, criteria for assessment, teaching objectives, and learning outcomes and the lesson plan with the terminal objectives, enabling objectives, indicators, teaching procedures, activities, and materials. They were revised according to experts' suggestion. The experts gave some suggestions for further revision of both the unit plan and lesson plan. The experts' validation of both unit plan and lesson plan was illustrated in Table 3.1.

Expert A suggested that aims of the unit are too broad, they should be specific and cover under the same theme. Therefore, the researcher revised the second item of

the aims of the unit and made it clear and more concise to cover all lessons in term of the aim of the unit.

Expert B suggested that teaching objectives are too complicated and unclear. They should be taken away some of unnecessary items whether they are not linked to the lessons. As the result, the researcher adjusted the unit plan by reorganizing and sequencing of the objectives in order to link to the main 4Cs framework of CLIL in each lesson to suit the contents and theme of each lesson.

Expert A suggested regarding to the lesson plan that the terminal objectives are too broad as well as enabling objectives are too general and unclear with the content and language used. As the result, the researcher made correction on the terminal objectives and adjusted the enabling objectives to suit with the specific topic. Also the sequence of the objectives should be re-organized and balanced of the content and indicators.

Expert B suggested that teaching procedures should specify the stage of teaching in order to make clarification of the teaching process in each stage according to 4Cs framework. As the result, the researcher added the learning and teaching stage for each session to ensure that the process of teaching would be covered.

5.3 Observation Form

After the observation form had validated, the teaching and learning stage, students' behaviors, and the frequency of time, they were revised according to experts' suggestions. The experts gave some suggestions for further revision of observation form. The experts' validation of the observation form was illustrated in Table 3.1.

Expert A suggested that some of checklists are unclear and the items of

students' behaviors are not consistency with the teaching and learning stage. As the result, the researcher re-organized of the items to fit into the appropriate stage based on CLIL 4Cs framework.

Expert B suggested that the frequency of time should be identified the ranking scale in order to easily conduct and analyze the data of the experimental process. As the result, the researcher adjusted the ranking scale of each item and also added the number on its direction.

5.4 Learning Log

After the learning log had validated, the few questions, some items were revised according to experts' suggestion. The experts gave some suggestions for further revision of it. The experts' validation of the observation form was illustrated in Table 3.1.

The experts gave some suggestions for further revision of learning log for eliciting the students' opinion after each lesson of EAP course. There were additional comments given by the experts as follows.

Expert A suggested that there were quite long questions and items were not consistent of the lessons of the EAP course. As the result, the researcher made the amendments with the appropriate questions and adjusted questions for their feedback writing about the lesson.

Expert B suggested that there were inadequate questions for eliciting based on their opinions about the particular lesson. As the result, the researcher added two more valuable questions for the students' feedback of each lesson.

Step 6: Conduct the pilot study

After the revision of the instructional instruments: lesson plan, observation form, the researcher piloted the lesson plan with 32 science major students. They were from the same level and background knowledge and they were studying at Udon Thani Rajabhat University. The purposes of the pilot study were to prepare the teacher and the developed EAP course using CLIL approach in class and to find out any potential problems necessary for the implementation stage of the experiment. Based on the results gained from the pilot study, the achievement test, the lesson plan, observation form, and learning log for the development of EAP course using CLIL approach were revised. The research instruments were organized as shown in the Table 3.2.

Table 3.2: Organization of Research Instruments

Research Instruments	Objectives	Time of distribution	Statistics
Needs Analysis	To determine the needs and interests	Before the experiment	Mean, S.D.
Achievement Test	To assess the achievement in reading and writing skills	At the beginning of the lesson and the end of the course	Mean Scores S.D. and t-test
Unit Plan/ Lesson plan	To develop EAP course using CLIL	Week 2-14	IOC Scores

Observation Form	To check student's engagement in class	During class activities	Frequency and Mean scores
Learning log	To explore the students' opinions toward the contents	At the end of the lesson	Descriptive analysis and percentage

These instructional instruments were altered according to the results of pilot study. The results stated that there were quite long lessons and diversity of activities in class, so some activities were time consuming and more complicated. Another problem found when piloted study was the reading text, which was too long and students spent lots of time to read. In addition, the exercises were very difficult to them and inappropriate for the level of education. As the result, the researcher found that the lesson plan needed to be more organized and improved it to be concise because the students could not finish their work or tasks in time. Also, some exercises couldn't be done during class due to time.

Stage 2: Implementation Stage

Conducting the experiment (Data Collection)

The data collection method that was used to assess the achievement of students' reading and writing skills was a single group design and also the engagement of the students in the classroom activities. The researcher compared the students' achievement in reading and writing skills by using pre-test and post-test mean scores as a whole course. The data were collected in three parts; pre-test, implementation of the instruction, and post-test. In the pre-test, the achievement test

was administered. The students spent 1.30 hours to do the Achievement Test as the pre-test on the first day of the course to determine students' achievement in English reading and writing skills. In the implementation of the instruction, the experiment was conducted for 15 weeks in the second semester of academic year 2011. It was designed for 37 undergraduate students who were the first year students from the Faculty of Science and enrolled in English for Academic Purposes course. The class met once a week for 3 hours. Each lesson was composed of 4 stages of instruction as in 4Cs framework: warm up stage (Content), presentation stage (Communication), practice stage (Cognition), and production stage (Culture). According to reading and writing instruction, the teacher provided the reading cards and students worked in group (usually 6 groups) and then the teacher asked the questions for each paragraph of the text to check their comprehension. The students were assessed from interaction among peers and with the teacher in answering questions and discussing about the jigsaw reading. Therefore, communication was included in the process of language of learning, language for learning, and language through learning according to CLIL approach. As for writing part, the teacher modeled them the process of writing to activate their writing skills by having them create their own topic which connected with their community or country on the last stage (culture). Then the students were assigned to write a short paragraph based on paragraph writing format. Also, the students were encouraged to build up their own awareness for the community and the environment as culture and responsibilities are the key needed for the CLIL approach. For example, in the Global Warming lesson, the students worked in group and wrote the mind mapping regarding the learning topic or relevant. Another writing activity

was the students had to design the poster in the target language to contribute to the 4R (reuse, recycle, reduce, and respond) campaign to sustain the environment.

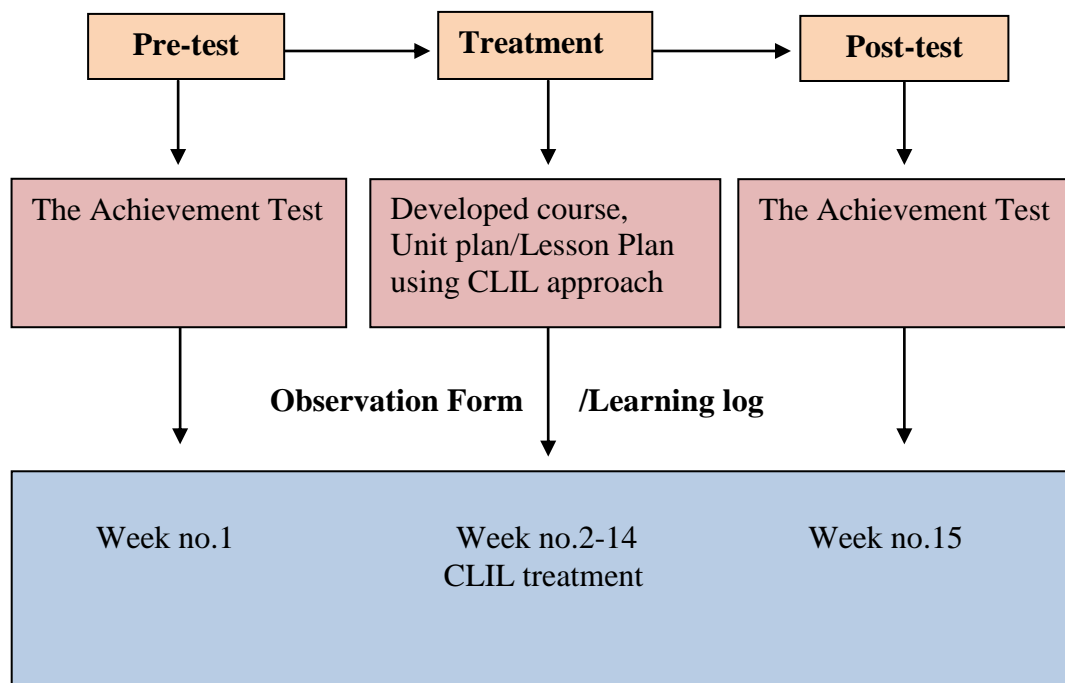
Finally, students were post-test on the 15th week. The post-test was same to the pre-test. The pre-test and post-test were used to compare the students' achievement test in reading and writing skills before and after taking the achievement test in the developed EAP course using CLIL approach. The summary of data collection was illustrated in Figure 3.3.

Figure 3.3: Summary of Data Collection

Data Collection:
Before the implementation
<ul style="list-style-type: none"> - Unit Plan, lesson plan, and research instrument were submitted to the panel of experts. - Suggestions and comments from the experts formed basis for adjusting the lesson plan and the test.
During the implementation
<p>Week 1: At the beginning of the study, students were given an overview of the course and then they did the Achievement test as a pre-test for 1.30 hours.</p> <p>Week 2-14: Students participated in the lessons (3 hours per lesson and per week).</p> <ul style="list-style-type: none"> - The observation form was used by the teacher to check the students' engagement in class. - The learning log was distributed to the students at the end of each lesson.
After the implementation
Week 15: The Achievement Test (post-test) was distributed to the students.

Also, the data collection process was shown in Figure 3.4.

Figure 3.4: Data Collection Process



An exploratory study aimed to investigate the achievement of reading and writing skills of the 1st year undergraduate students who enrolled the EAP course in the 2nd semester of academic year 2011. Students were asked to do the pre-test at the first period and post-test in the last period. The test took 1.30 hours. Then the reading and writing scores were used for the significance differences. Observation form as a checklist was used to see the students' engagement in classroom activities and learning log was written by the students to see their opinions about CLIL class activities.

Analyzing the data (Data Analysis)

Research Question 1: To what extent does the developed course using CLIL approach enhance the students' reading and writing skills?

The research instrument used to answer research question 1 was the achievement test were analyzed and compared on the progress of reading and writing skills after the experiment using CLIL approach.

The independent variable was the developed course using CLIL approach and the dependent variable was the mean scores on the test.

The students' achievement test result was processed and analyzed using SPSS version 19. The data obtained from the pre-test and post-test was statistically analyzed by means of arithmetic mean, standard deviation, and t-test (paired samples test) in order to compare the differences in the students' achievement in reading and writing skills.

Research Question 2: To what extent does the developed course using CLIL approach enhance the students' engagement in classroom activities?

The research instrument used to answer research question 2 was the observation form and the dependent was the frequency of the students' engagement on 15 items of observable behaviors checklists to see the students' engagement in classroom activities and also to see their improvement of reading and writing skills. Also, the learning log was analyzed by using the frequency to see the students' opinions toward the EAP course and also used qualitative analysis in this part.

Summary

This study was the experimental research. The research has been conducted in two stages as follows:

Stage 1: Development of EAP course using CLIL approach

The achievement test was validated by a panel of experts. Also, the unit, and lesson plan were validated by a panel of experts in order to examine whether the

research instruments of EAP developed course using CLIL approach had a validity or not.

Stage 2: The implementation of Instruction

The study was conducted with the 1st year of 37 undergraduate students on the second semester of academic year 2011. The pre-test and post-test were distributed to the students before and after the course and the means scores from the experiment were analyzed significantly difference whether what extent the developed course to enhance reading and writing skills of the freshman using CLIL approach.

As for the observation form was checked by the teacher to see the students' engagement in classroom activities during instruction. Additionally, a learning log was written by the students at the end of each lesson to see the feedback from the students toward the particular content and language of the developed EAP course according to CLIL approach.

CHAPTER IV

FINDINGS

Introduction

This chapter reports the results from the study entitled “Development of an English for Academic Purposes Course Using Content and Language Integrated Learning (CLIL) to Enhance Reading and Writing Skills of Students at Udon Thani Rajabhat University” according to the research questions and the hypotheses, which were explained as follows:

Research Question 1

To what extent does the developed course using CLIL approach enhance the students’ reading and writing skills?

The research instrument used to answer research question 1 was the achievement test with 60 points, which consisted of both reading and writing parts. The first research question focused on identifying whether the pre-test mean scores differed from the post-test mean scores at the level of significant 0.05 by using t-test as a mean. The results were statistically analyzed to compare the achievement of the study (Appendix P).

Within class paired sample t-test was used to find out whether there was a significant difference between the pre-test and post-test mean scores of students. The students’ pre-test and post-test mean scores, standard deviation, t-values, and statistical significance are presented in Table 4.1 and Table 4.2.

Table 4.1: Means and Standard Deviation

Mode of Assessment	\bar{X}	N	S.D.	Error Means
Pre-test	19.11	37	5.87	.96
Post-test	26.89	37	5.67	.93

Table 4.2: Means, t-values, and significance of the pre-test and post-test

Mode of Assessment	\bar{X}	Means Differences	t.	df.	Sig.
Pre-test	19.11	-7.78	- 8.90	36	.000*
Post-test	26.89				

*p<0.5

It was found from the mean comparison that students earned a higher post-test mean score (mean = 26.89) than a pre-test mean score (mean = 19.11). The total score was 60 points, the mean difference was – 7.78 and the t-value was – 8.90 with a degree of freedom of 36 (N = 37). The result showed that there was a significant difference between the mean scores from the pre-test and post-test at a significant level (p<.05).

Thus, the first hypothesis, which stated that there would be significantly higher scores on post-test than the pre-test, was accepted. It indicates that the students' reading and writing skills were significantly enhanced after receiving the treatment using CLIL approach.

Research Question 2

To what extent does the developed course using CLIL approach enhance the students' engagement in classroom activities?

The research instrument used to answer research question 2 was the observation form and the dependent was the frequency of the students' engagement on 15 items of observable behaviors checklists to see the students' engagement in classroom activities using CLIL approach, which also helped them improve reading and writing skills.

Additionally, the learning log was analyzed by using descriptive statistic to see the students' opinion toward the EAP course.

Findings from the observation form

In the observation form, students were observed by the teacher to see their attendance, interaction, and participation in the classroom activities. The observation form was filled during the instruction by the teacher when the class started of each lesson. The teacher followed the stage of instruction based on CLIL approach as the 4Cs framework. Then the teacher checked the students' engagement on the observable behaviors checklist in classroom activities: stage 1- introduction to content, stage 2 - communication, stage 3- cognition, and stage 4- culture.

Initially, in the CLIL classroom students learned effectively in group work activity. Therefore, students were divided into 6 groups to participate in classroom activities for each lesson. The teacher checked the fifteen lists of students' engagement of every item based on rating scale as follows:

1 means students had no interaction/ participation in classroom activities.

2 means at least 2 groups of students showed the engagement during classroom activity.

3 means there are 4 groups of students showed the engagement in classroom activity.

4 means all 6 groups of students engaged in classroom activities according to observable checklists.

Furthermore, the observation form was applied as an instrument to check the students' engagement in each activity whether their participating in EAP class increase using CLIL approach or not. The details of observation form results for unit 1 were shown in Table 4.3.

Table 4.3: Observation form results for Unit 1

Observable behaviors	Unit 1/ Lesson		
	1	2	3
1. Students ask the questions about the unknown topic at the beginning.	3	3	3
2. Students answer the simple questions that related to the topic.	2	3	3
3. Students follow the teacher's instruction appropriately.	3	3	3
4. Students pay more attention while doing class activities.	3	4	4
5. Students work in group for reading assignment completely.	3	4	4
6. Students communicate with a teacher and peers using medium language.	2	2	3
7. Students take note when the teacher gives an explanation.	2	3	3

8. Students do the exercise completely after finishing in each session.	3	3	4
9. Students summarize the story after reading with a simply paragraph writing.	2	2	2
10. Students predict unknown words correctly.	2	2	3
11. Students demonstrate what they have learned appropriately.	2	3	3
12. Students express and share their opinions among friends.	2	3	3
13. Students create their own topic into a written paragraph properly.	2	3	3
14. Students make the presentation of new concepts of the topic clearly.	2	3	3
15. Students promote awareness of cultural difference/global citizenship.	3	3	4
Mean scores	2.40	2.93	3.20

According to the level of the students' engagement in classroom, the range of scores for their engagement was set as follows:

3.50-4.00 = highly engagement

3.00-3.50 = mostly engagement

2.50-3.00 = likely engagement

2.00-2.50 = low engagement

At the beginning of the course, the rating scale of each item in unit 1 consisted of the three lessons, and the first lesson was shown that only a few group engaged in classroom activities with the average level means score 2.40. The means score was

shown that students had low engagement in the first lesson. Nevertheless, the mean scores of lesson 2 and 3 were 2.93 and 3.20 respectively. Means scores were described students had likely engagement in lesson 2 and mostly significance engagement in lesson 3. The findings from the observation form which observed by the teacher indicated that students' engagement in classroom activities significantly increased after instruction using 4Cs framework of CLIL approach.

During the EAP classroom using CLIL approach was conducted to check the students' engagement in classroom activities by taking the video. The video recording was set up and the teacher checked the students' engagement during the instruction. To ensure the students participated in class activities and involved in all sessions. The teacher observed their engagement based on the observable behaviors checklist with the stage of teaching in CLIL classroom for lesson 3 according to 4Cs framework: Content, Communication, Cognition, and Culture. Students showed their engagement in classroom activities which recorded when they were participating in classroom. The observation checklist results were illustrated in Table 4.4. Also, the course contents of EAP course was shown in Table 4.5.

Table 4.4: Observation form results

Teaching Procedures	Items	Unit 1
		Lesson 3
Warm Up (Content)	1. Students ask the questions about the unknown topic at the beginning.	3
	2. Students answer the simple questions that related to the topic.	3
	3. Students follow the teachers' instruction appropriately.	3
	4. Students pay more attention while doing class activities.	4
Presentation Stage (Communication)	5. Students work in group for reading assignment completely.	4
	6. Students communicate with teacher and peers using medium language.	3
	7. Students take note when the teacher gives an explanation.	3
	8. Students do the exercises completely after finish in each session.	4
Practice Stage (Cognition)	9. Students summarize the story after reading with a simply paragraph writing.	2
	10. Students predict unknown words correctly.	3
	11. Students demonstrate what they have learned appropriately.	3
	12. Students express and share their opinions among friends.	3
Production Stage (Culture)	13. Students create their own topics into a written paragraph properly.	3
	14. Students make the presentation of new concepts of the topic clearly.	3
	15. Students promote awareness of cultural difference/global citizenship.	4

Remarks: Rating scale of the level of students' engagement: 1 = Never, 2 = Rarely, 3

= Most of the time, and 4 = Always

Table 4.5: Course contents

Unit of the course	Number of Lesson	Theme / Topic
1. The environmental problems	1 2 3	<ul style="list-style-type: none"> • Global Warming • Pollution • Climate Change
2. The cycle of life	4 5	<ul style="list-style-type: none"> • Water Water! • Frogs and Toads
3. Biotechnology	6 7	<ul style="list-style-type: none"> • Gene Cloning • GMO
4. Diseases	8 9	<ul style="list-style-type: none"> • AIDS/ HIV • E. Coli disease
5. Living organisms	10 11	<ul style="list-style-type: none"> • Dinosaurs • Life on the Other Planets
6. World energy	12 13	<ul style="list-style-type: none"> • Solar Energy • Renewal Energy

The results were found for each item of students' observable behaviors checklist as illustrated in Table 4.6.

Table 4.6: Students' observable behaviors checklists results

Students' Engagement	Students observable behaviors
Item 1	Students engaged in classroom activities at level 3 of the lesson 3, after that the engagement was at level 4 on lesson 4, where they engaged in classroom activities most of the time as well as the lesson 6 and 7. After students studied about the familiar content as the

	<p>climate change, the new topic was introduced on lesson 4. Therefore, their engagement was increasingly different, same as lesson 6 and 7 and also they already had background knowledge on the new topic.</p>
Item 2	<p>Students answered a few questions on lesson 1 at the level 2 since it was the first unit of the course, and then the engagement continued increasingly different at level 3 on the lesson 2 to lesson 6, after they were familiar with science contents as the field of their studies. As the result, students increasingly engaged in classroom activities at level 4 for the rest of the topics of the course.</p>
Item 3	<p>Students followed the instruction in classroom activities at level 3 from the beginning of the lesson throughout the lesson 4, then the engagement was increased in lesson 5 at level 4 because they were interested in the new topic. The students' engagement was increased at level 4 in the lesson 8 to the lesson 13, where they always followed the teacher's instruction.</p>
Item 4	<p>Students paid more attention while doing class activities at level 3 on the first lesson, and it was continuously increased at level 4 on lesson 2 to 5 where they always paid attention in classroom activities. But they paid less attention on lesson 7, which was GMO since it was not an interesting topic for them. Consequently, their engagement was increased in lesson 8 to 11 at level 4, but decreased in lesson 12 and 13 at level 3 where students paid attention most of the time because the new topic unit just was introduced.</p>

Item 5	<p>Students mostly worked in group for reading assignment at level 3 and 4 where they worked most of the time for the lesson 1, 5, 6, 7, 8, 10, and 12. They always worked in group for the lesson 2, 3, 4, 9, 11, and 13. The students increasingly engaged in classroom on working as a group work so that they enjoyed working among their classmates.</p>
Item 6	<p>Students rarely communicated with the teacher and peers using medium language on lesson 1 and 2 since the class just started and students had low confidence to use the L2 in classroom. However, they mostly communicated in English with the teacher and peers on the lesson 3 to 8 where they felt confident to do so after gaining more knowledge about the content that related to the field of studies. They rarely communicated again for the lesson 9 to 10, which were not interesting topics and the vocabulary was very difficult for them but their engagement was increased in the lesson 11 and 13 at the level 4.</p>
Item 7	<p>Students rarely took note when the teacher gave an explanation on lesson 1 and 2, the lesson one was just started and they found the lesson 10 had too many unfamiliar words and was difficult to remember the scientific name of dinosaurs. However, they mostly took note for the rest of the lessons especially in the lesson 11 and 13. They always took notes while the teacher was giving an explanation because they were interested in both topics and enjoyed participating in various activities.</p>

Item 8	Students did lots of exercises after class activities on the lesson 3 and 11, climate change and life on other planets. They participated in all activities and gained lots of knowledge, so the exercises were quite easy for them to do so after the lessons.
Item 9	Students rarely summarized the story on the lesson 9, E. coli which was too new and lots of unknown words for them. Moreover, the topic was not interesting and too long passage to write the summary from the reading text.
Item 10	Students rarely predicted the unknown words correctly on the lesson 1, 2, and 10 but the rest were increased of the engagement at level 3, where the students mostly predicted the unknown words correctly. As for the lesson 1 and 2, topics were quite difficult for them as well as the lesson 10, which had lots of scientific terms and was hard to remember for them.
Item 11	Students rarely demonstrated what they learned on the lesson 1 and 11, global warming, was the first lesson they were confused about the learning process as well as the lesson 11 which was dinosaurs. They had struggled in taking part in necessary activities, but the engagement in class was increased to level 4 in the lesson 4.
Item 12	Students always expressed and shared their opinions among friends on the lesson 13, renewable energy. They had background knowledge about the topic, so they definitely expressed and shared the ideas of it to their friends. Nevertheless, there were some of the

	lessons that students mostly expressed and shared their opinions with friends, but rarely had those engagements on lesson 1, 10, 11, and 12.
Item 13	Students rarely created their own topics into a written paragraph properly on several lessons but increasingly engaged in the classroom activities at level 3 on the lesson 11, 12, and level 4 on the last lesson. Students could not create their own topic at the beginning of the lesson but they gained knowledge after instruction and they finally were able to create.
Item 14	Students rarely made the presentation of the new concept of topics at the beginning of the lesson but they apparently made it afterward and continued developing their performance to the end of the course on the lesson 13.
Item 15	Students mostly promoted awareness of cultural difference/global citizenship and the engagement was continuously increased at level 4 on the lesson 10 to 13. They always promoted awareness of cultural difference/ global citizenship after instruction using CLIL concept.

The observable behaviors checklists of the students' engagement, the findings showed that students had higher engagement in classroom activities in the beginning of the course based on the observable checklist of each lesson during the experiment. After instruction for the whole course, their engagement increased using CLIL approach.

Summary

This chapter presented the findings of the current study under two major parts: the results of pre-test and post-test of the developed course using CLIL approach to enhance reading and writing skills and the engagement of students in classroom activities.

According to the research question 1, the findings revealed that the participants gained higher post-test mean scores than the pre-test mean scores on the achievement test. The findings indicated that students' reading and writing skills improved after instruction in the developed course using CLIL approach.

As for research question 2, the results showed that students participated in classroom activities most of the time according to 15 observable behaviors checklists. Additionally, they enjoyed learning through the assigned tasks with CLIL materials, which enhanced the students' engagement during the teaching procedures. Learning log was conducted to see the students' opinions toward the instruction using CLIL approach after the end of each lesson. Most of students expressed their opinions that they gained both content and language at the same time and enjoyed the classroom activities. Also, they applied what they have learned into their field of the studies as well.

In conclusion, the findings from this study showed that the developed EAP course using CLIL approach helped students improve reading and writing skills (Appendix Q) and the developed course using CLIL approach increased the engagement in classroom activities. Also, students had positive attitude towards the developed course using CLIL approach.

The next chapter will explain a summary of the findings, a discussion of the findings, and the recommendations for future research.

CHAPTER V

DISCUSSIONS AND RECOMMENDATIONS

This chapter presents the summary of the study, and a discussion of the two main findings. Also, pedagogical implications, and recommendations for future research studies.

Summary of the study

This study was a single group design research study that developed EAP course using 4Cs framework based on CLIL approach. The samples were the undergraduate students majoring in Biotechnology, the Faculty of Science. The duration of the experiment was the second semester of academic year 2011.

Summary of the findings

The objectives of the study were 1) to develop the EAP course using CLIL approach to enhance reading and writing skills, 2) to investigate the engagement of the undergraduate students in classroom activities using CLIL approach. The research design of this study was a single group, pre-test and post-test before and after experiment. The samples for this study were the 1st year students, who were studying at Udon Thani Rajabhat University in the second semester of the academic year 2011 and the research methodology was used the purposive sampling.

The research methodology was divided into two stages: The development of EAP course using CLIL approach and the experiment.

Stage I: Development of EAP course using CLIL approach

The development process of the EAP course using CLIL concepts consisted of six steps: 1) Explore and study the fundamental concepts and teaching procedures relating to CLIL approach; 2) Conduct needs analysis; 3) Construct the research instrument and instructional instruments; 4) Validate research instrument and instructional instruments by a panel of experts; 5) Revise research instrument and instructional instruments according to the experts' comments; 6) Conduct the pilot study.

Step 1, the theories and the basic concepts related to the present study were explored. The studied topics were CLIL approach and 4Cs framework proposed by Coyle (2010), and EAP courses in higher education level.

Step 2, needs analysis questionnaire was conducted to obtain the students most interesting six unit topics and other background knowledge of English, especially reading and writing skills, also their needs and interests in trend of interesting issues.

Step 3, the unit plan and lesson plan were constructed for implementing afterwards.

Step 4, the research instrument and instructional instruments were validated by the experts.

Step 5, after validated research instruments, all of them were revised according to the experts' suggestions.

Step 6, a pilot study was carried out prior to the experiment. Then, the instruments were revised based on the information gained from the pilot study.

Stage II: The Implementation of EAP course using CLIL approach

The experiment consisted of four steps: 1) Pre-test: EAP Achievement Test; 2) Implementing the instruction; 3) Post-test; 4) Analyzing the data from EAP achievement test via t-test, observation form and learning log using statistical tools.

Step 1, constructed the achievement test for the experiment and used for pre and post-test according to EAP course contents.

Step 2, conducted the main study, the researcher implemented the developed course using CLIL approach into the class.

Step 3, the achievement test was used to distribute to the students after the course to compare to the pre-test.

Step 4, after conducted the research, the data was analyzed using statistical tools; arithmetic means, standard deviation, frequency, t-test, and percentage.

The details of the study will be discussed based on the research question 1 and research question 2.

Discussion

The discussion was based on the findings which revealed that the developed EAP course using CLIL approach enhanced students' reading and writing skills and also the engagement in the classroom activities.

According to the pre and post test results, students gained higher scores on the post-test of the achievement test than the pre-test. There were three significant difference, first students with low achievement were only 13.5%. Second, students with moderate achievement were 86.5%. Meanwhile, there was none of them with high achievement on the achievement test. It indicated that most of the science

students from Udon Thani Rajabhat University improved in reading and writing skills using CLIL approach on the moderate level of English achievement. According to the developed course, course contents are quite difficult and unfamiliar to the students but some are still familiar for them. However, the contents will be selected from what their needs and interests are, so that they could prepare themselves for the study. The classroom activities are also provided to suit the level of the students with appropriate environment. Also, learning materials are very useful and meaningful for the topics or contents. Importantly, all students have a chance to participate in all activities provided by the teacher using medium language for the particular content as the unique CLIL approach in ELT classroom.

From the observation form results, there were four teaching procedures that consisted of fifteen items altogether. In each stage, the 4Cs framework: Content, Communication, Cognition, and Culture were also included. The results were presented for the following stages.

In the first stage, the findings revealed that the students mostly asked and answered the questions and also they followed the teachers' instruction and paid much attention most of the time. However, there were some indications of students' engagement results that were about their behavioral engagement in class during the lesson as mentioned in each item from the earlier chapter. So, the results indicate that students have good feedback by predicting the content for the warm up stage.

The second stage, the results suggested that most students worked in group and likewise they rarely communicated with teacher and peers. Meanwhile, they took notes and did the exercises completely after they finished each session most of the

time. Students should expose their performance for communication and use medium language with the teacher and peers as well as content at the same time.

The third stage, most of the students rarely summarized the story by writing a simple paragraph after reading it. In contrast, they could predict unknown words and demonstrate what they have learned appropriately most of the time. Also, they expressed and shared their opinions among friends most of the time. Even though, they could not summarize from what they read into written form, they keep practicing in reading texts and interesting articles. Their English ability would be improved from time to time.

The fourth and final stage, the students rarely created their own topic into a written paragraph properly. On the other hand, they made the presentation of new concepts and also promoted awareness of cultural difference and global citizenship most of the time. In conclusion, the students have done lots of activities, they can make the presentation and produce the postcards campaign as the reflection of the lesson as the production stage. So, the results indicate that they improve their understanding about cultural difference and help the community sustain proper environment.

As for the learning log, the writing piece of students' opinions toward the EAP developed course using CLIL approach consisted of four guided questions. Their answers indicated that the students had positive attitude toward the developed course using CLIL approach: question 1) students answered the question into the simple written form correctly, question 2) students expressed their positive feelings about classroom activities indicating that they mostly enjoyed learning and participating in all activities provided by the teacher, question 3) students explained that the

developed course using CLIL approach was useful for reading and writing part and most contents were important for science students, especially biotechnology. It means that students describe that the developed course is very useful for the field of their studies or related to their subject matter. The fourth and last question, students can apply the content to their major, which indicates that the developed course is applicable to their field of studies. So, the students had positive attitude toward the developed course using CLIL approach regarding their written piece of the learning log.

The research used the learning log as the instrument in this study to see their feedback in CLIL classroom. The teacher distributed the learning log to the students at the end of each lesson and the writing feedback was spent about 10 minutes to complete their answers. The findings were discussed about their opinions on EAP course using CLIL approach and also their feedback was influenced their engagement in classroom activities

Findings from learning log

In the learning log, students were asked about their opinions towards the developed course using CLIL approach, and what they felt about the contents. The students were asked to write in brief sentences, according to the guided questions by the end of each lesson. There were four questions and they were asked about the feedback of the lesson using CLIL concept that helped students gain more knowledge through the content and language.

The followings are some examples of learning log, which were written by students regarding the developed course using CLIL approach. (see Appendix L)

Question 1: *What did you learn in class today?*

Answer: "I learned about Water cycle today"

According to the answer above revealed that they wrote their own sentences and understood the question and knew how to respond the simple question about CLIL class.

Question 2: *How do you feel about the activities provided by the teacher?*

Answer: "I happy and love. I enjoy study very much."

The second question was used to investigate their preference of the topic and other activities provided by the teacher during the class. So, the answer described how they appreciated to participate in the class activities and to express their feelings about all kind of activities they were involved. Therefore, EAP course using CLIL approach was effective in term of variety of interested activities according to their answers. Also, the engagement of students in the classroom activities was significantly increased.

Question 3: *Are activities useful for your reading and writing skills?*

Answer: "Yes, I use for reading and writing skills about science."

The third question was asked about the useful of classroom activities based on integrating reading and writing skills. Since they were from the major of Biotechnology, they all studied about science and relevant so, they were familiar with the field of the study provided by the teacher. Moreover, EAP course using CLIL approach was emphasized about the science studies so that most topics were useful and meaningful for them for further study in their major. As the result, students' engagement was increasingly different from the beginning.

Question 4: *How would you apply what you have learned to your major subject area?*

Answer: “I apply in my study and major. I learned to read and write about Biotechnology.”

The fourth question, students were asked how to apply what they have learned to their major subject area. Most students answered the question based on their new knowledge of each lesson they have gained to describe how they apply the science content and the language use through their major as biotechnology. The findings revealed that all contents were applied into their field of the study, so the developed EAP course using CLIL approach was effective and necessary for their further study.

The details of learning log results for lesson 1 were shown in the Table 5.1.

Table 5.1: Frequency of learning log results for lesson 1

Unit 1/ Lesson 1	Students' answers	f	Percentages
What did you learn in class today?	Global Warming	30	81.08
	Other answers	7	18.92
How do you feel about the activities provided by the teacher?	Fun, good, enjoy, and happy	26	70.27
	Other answers	11	29.73
Are activities useful for your reading and writing skills?	Useful for both reading and writing	27	72.97
	Other answers	10	27.03
How would you apply what you	Can apply in reading about	21	56.76

have learned to your major	environment and subject area		
subject area?	Other answers	16	43.24

*N = 37

The findings of the learning log indicated that students' opinions toward the developed course using CLIL approach were positive attitude. Most students understood the question and understood questions how to respond all four questions after the end of each lesson. Therefore, the number of keywords which answered the first question was 30 for 81.08%. As for the second and the third question, students had lots of fun in class activities that were provided by the teacher, and the topic was useful for reading and writing skills with the percentage of 70.27 and 72.97 respectively. For the last question, students could apply what they have learned to their major subject area for 56.76%.

The followings are the four questions on learning log and keywords of the thirteen lessons were shown in Table 5.2.

Questions for students on learning log:

1. What did you learn in class today?
2. How do you feel about the activities provided by the teacher?
3. Are activities useful for your reading and writing skills?
4. How would you apply what you have learned to your major subject area?

Table 5.2: Keywords of the 13 lessons on learning log

Unit	Lesson	Students' Keywords
1	1	1.1 Global warming 1.2 fun, good, enjoy, and happy 1.3 useful for both reading and writing 1.4 can apply in reading about environment and subject area.
	2	1.1 Pollution, water pollution, natural disasters, cause/ effect 1.2 happy, enjoy 1.3 vocabulary is important, topic is good for reading and writing 1.4 can be used in daily life, can apply in biology research
	3	1.1 Climate change, deforestation, global warming 1.2 fun, enjoy 1.3 can be used directly in reading as well as writing 1.4 can learn about cause and effect, how to solve the problems
2	4	1.1 Water, water treatment, the importance of water 1.2 fun, happy, enjoy 1.3 absolutely useful in reading and writing. Find main ideas and supporting details. 1.4 can be used in everyday life.
	5	1.1 Frogs and Toads, life cycle of frogs 1.2 enjoy, fun, happy 1.3 can be applied in reading and writing, to read about frog' lives. 1.4 use in related field, describing about biotechnology.

3	6	<p>1.1 Gene cloning, unusual sexual reproduction</p> <p>1.2 enjoy, fun, happy</p> <p>1.3 difficult in vocabulary</p> <p>1.4 can read about cloning or science story</p>
	7	<p>1.1 GMO, GMO Crops, GMO in Thailand</p> <p>1.2 excited to know about GMO, enjoy to learn vocabulary</p> <p>1.3 useful in reading and writing about biotechnology</p> <p>1.4 helps me to know about GMO</p>
4	8	<p>1.1 AIDS and HIV</p> <p>1.2 enjoy to learn about AIDS and HIV, cause/ effect about AIDS</p> <p>1.3 content is interesting to read and write</p> <p>1.4 can apply in biotechnology, to know diseases</p>
	9	<p>1.1 E. Coli disease, learned about diseases of E. Coli</p> <p>1.2 gain knowledge about how to prevent E. Coli</p> <p>1.3 reading and writing about chemicals about E. Coli</p> <p>1.4 gain more knowledge to know about contaminated food</p>
5	10	<p>1.1 Dinosaurs, Jurassic Times</p> <p>1.2 learned about ancient creatures living on earth, enjoy pictures</p> <p>1.3 useful in both reading and writing</p> <p>1.4 apply in reading texts about dinosaurs, vocabulary</p>
	11	<p>1.1 Living creatures that exist on other planet</p> <p>1.2 gain more vocabulary about living creatures, enjoy vocabulary</p> <p>1.3 useful reading passage and writing a paragraph</p>

		1.4 apply in related fields, academic reading and writing
6	12	1.1 Solar Energy 1.2 happy and enjoy activities provided by the teacher 1.3 useful in reading and writing exercises 1.4 to learn more about solar cells can produce electricity in house
	13	1.1 Renewal energy, energy use in everyday life, great energy 1.2 happy to work in group, share and express opinions 1.3 It is useful in reading and writing, read about energy consumption. 1.4 to know how to reduce the energy we use everyday life.

The previous research indicated that using CLIL approach should be employed in the classroom especially on English for Academic Purposes courses (EAP) where the content is instructed only as a material for practicing rhetorical skills, reasoning skills or problem solving skills. Therefore, CLIL can be implemented in the classroom because it fulfills both language and content learning at the same time (Paszyk, 2009). Furthermore, (Deller, 2005) claimed that “there are many interactive, communicative activities that could be applied across the curriculum.” She also pointed out that there is proof in subject teaching that there is less interaction than in language teaching. It means that subject instructors are providing more input and taking more than language instructors.

Celaya (2006) mentioned, this research result is consistent to Celaya’s studies as the clearest benefit for CLIL learners is that they are able to gain higher level of proficiency. More interaction of students was found in the communicative context

implementing 4Cs is suggested by Coyle (1999). Moreover, since reading comprehension is to be an interactive process involving the reader, the text and the context, CLIL had played an important role to bring students into such interactive process during their engagement in class reading activities in CLIL learning environment which is consistent with Block, Gambrell and Pressley (2002). Two methods of assessing reading were used: alternative and traditional. Observation was used as alternative reading assessment. The alternative way gave feedbacks on students' comprehension as suggested by Richard (1997) while traditional assessment was used by multiple choice questions and showed students' improvement by grades. In writing part, students were taught to learn to put sentences to suit the purpose of writing in each topic for each context according to the basic concept of teaching writing mentioned by Pidchamook (2003). Integrating reading and writing to both content learning and language learning had made students' engagement rise and this is to follow the CLIL methodology by Wolff (2005). In EAP course where reading and writing skills are integrated in order to blend the content knowledge and language use as a CLIL concept. These can bring benefits to the learner with both content and language, the students gained reading of the text and also construct new texts based on reading in particular topics. Students can compose a paragraph writing with simple writing format.

In summary, CLIL should be conducted in both teaching and learning and therefore learners will acquire more active participation to help them take in, understand, and memorize the new knowledge. Hence, the application of CLIL approach can enhance learners both content and language knowledge.

Pedagogical Implications

There are not a great deal of studies on CLIL approach to enhance learners' reading and writing ability in Thai context. Nevertheless, the present study revealed that CLIL approach could be employed in classroom to enhance students' reading and writing skills, especially in English for Academic Purposes (EAP) as well as English for Specific Purposes (ESP), and CLIL can be a medium to teach both content and language simultaneously. The CLIL curricular framework is composed of content, communication, cognitive, and culture (4Cs). In sum, CLIL is a way through which specific subject is learned and supplies the connecting link to the cognitive level. Moreover, the language itself is essential for the related subject and everyday communicative skills are equivalent. As students' reading and writing skills were enhanced, there were three major implications which can be depicted from the research findings of this present study as follows:

First, instructors may adopt different kinds of assessments to assess and evaluate students' reading and writing ability which is limited only multiple choices and short paragraph writing. The students can express their understanding in many ways, for instance writing an essay could be a good choice to assess students' writing ability since they have to write more paragraphs to convey their thoughts. To assess students' reading ability, teachers may ask them to summarize the main idea or find the topic sentence which could enhance students' reading skills.

Second, teachers ought to encourage students to think cognitively. It means that cognition can enhance learners' thinking skills. Teachers should not translate or tell everything about the content, but they have to provide learners opportunity to

think by themselves. It is not like Grammar Translation Method or Audio-lingual, CLIL spurs students to contemplate cognitively and systematically (Coyle, 2005).

Lastly, teachers should pick up content which is appropriate for level of the students. For example, if the content is too difficult, the students might be bored with the content. Needs analysis can be conducted to see students' interest and their learning outcome will improve (Hood, 2007).

In summary, CLIL approach offers an environment for explorative learning which refers to the exploring the content subject and the experimenting with specific aspects of the subject are also beneficial for natural activities in a CLIL classroom.

Recommendations for Future Research

In the present research, "Development of an English for academic purposes course using content and language integrated learning (CLIL) to enhance reading and writing skills of students at Udon Thani Rajabhat University", the research is restricted by the level of the learners. Hence, the future research should be conducted with different level of the students, for example the lower or upper secondary school students.

Besides, recommendations for the next study would be to investigate learners' speaking skills as CLIL can also enhance four skills of English: listening, speaking, reading, and writing. This current research has already investigated learners' reading, and writing ability. Therefore, it would be useful if the learners' speaking ability could also be studied. Also, all useful materials in classroom activities are especially concerned in a CLIL class, which will provided more authentic resources and engage the students in learning more effectively.

Finally, the interview or questionnaire should be employed as a qualitative measurement to show students' attitudes toward the instruction as students can express their opinions whether they like the kind of the instruction or not.

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APPENDICES

APPENDIX A
Needs Analysis Questionnaire

Questionnaire

This questionnaire is designed to investigate students' interests and background knowledge of English proficiency regarding English for Academic Purposes (EAP) in order to develop the course to suit their field and interests. EAP is a pre-sessional course which focuses on English academic reading and writing skills and provides for undergraduate students for further study in higher educational levels.

Directions: Fill in the blank, put \surd in in front of your chosen answer, or rank items according to instructions.

1. Age _____ years old
2. Gender Female Male
3. Currently studying in _____
4. You first started studying English when you were in _____
 Pre-kindergarten Kindergarten Pratom 1 Pratom _____
5. Besides studying English in class, do you have any opportunity to practice your English elsewhere?
 No (If no, please proceed to item 6.)
 Yes (If yes, please proceed to item 5.1.)
- 5.1 Choose and rank any 3 items below (1st, 2nd and 3rd) as the 3 most frequent activities you do to improve your English.

<input type="checkbox"/> Read English fables or books	Specify: _____
<input type="checkbox"/> Listen to radio or songs in English	Specify: _____
<input type="checkbox"/> Watch English TV programs or movies	Specify: _____
<input type="checkbox"/> Play English computer games or visit English websites	Specify: _____
<input type="checkbox"/> Communicate with friends through Internet by writing messages/emails or chatting in English	Specify: _____
<input type="checkbox"/> Speak English to foreigners or friends	Specify: _____
<input type="checkbox"/> Take English extra classes	Specify: _____
<input type="checkbox"/> Others	Specify: _____

6. Why do you want to practice your English?

Choose and rank any 3 items below (1st, 2nd and 3rd) as the 3 best reasons that make you want to practice your English

- To communicate in everyday life
- To gain knowledge from media which are in English and rarely found in Thai
- To get good GPA
- To be chosen by school to participate in academic competition
- To pass entrance examination to enter secondary school or university
- Others Specify: _____

7. In the last semester, what was your grade for English subject?

- F D C B A

8. How much do you think English reading skill is important?

- Very important Important Little important Not important

9. How much do you think English writing skill is important?

- Very important Important Little important Not important

10. What English skill do you think is difficult for you. (You may choose more than one.)

- Listening skill

Reason:

- Speaking skill

Reason:

- Reading skill

Reason:

- Writing skill

Reason:

11. Put ✓ in in front of the item that best describes your English reading proficiency.

- I can barely read English.
- I can read simple sentences in English, but when I don't know the vocabulary meaning, I won't be able to understand the whole sentence.
- I can read English sentences, and when I don't know the vocabulary meaning, I can guess the meaning from other words in the sentence.
- I can read passages in English, follow sequence of events, and understand the whole story.
- I can read English without difficulty.

12. Put ✓ in in front of the item that best describes your English writing proficiency.

- I can barely write in English.
- I can write English words.
- I can write simple sentences in English, but there are many times that I cannot write what I want to say or express.
- I can write a paragraph in English, but sometimes I don't know the vocabulary I want to use.
- I can write English with no difficulty.

13. Please select the 6 unit topics which are most interesting to you from the list below:

- | | |
|---|--|
| <input type="checkbox"/> Environmental Problems | <input type="checkbox"/> World Energy |
| <input type="checkbox"/> Planet on Earth | <input type="checkbox"/> Nutrition |
| <input type="checkbox"/> Cycle of Life | <input type="checkbox"/> Natural Disaster |
| <input type="checkbox"/> Biotechnology | <input type="checkbox"/> Computer and Internet |
| <input type="checkbox"/> Living Organisms | <input type="checkbox"/> Diseases |

14. The activities that I want to do or like to do are as follows. (You may choose more than one item.)

- Visit websites Listen to music Listen to conversations from recorders
- Watch TV or movies Read fables or books Perform role play
- Talk to classmates Play computer games Play movement games with friends
- None Others Specify: _____

15. When you are assigned to do activities or tasks, which of the below do you prefer most?

(Rank 1st to 4th from the activity you prefer most to least.)

Individual work Pair work Group work (3-5 people) Whole-class work

Others Specify: _____

16. In English classroom, what language do you want your teacher to speak?

English (all the time) Thai (all the time) English and Thai

Suggestions (if any)

.....

.....

.....

.....

.....

.....



Thank you for your time.

APPENDIX B
Needs Analysis Results

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	7	18.4	18.4	18.4
	19	27	71.1	71.1	89.5
	20	4	10.5	10.5	100.0
	Total	38	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	33	86.8	86.8	86.8
	male	5	13.2	13.2	100.0
	Total	38	100.0	100.0	

Item 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kindergarten	24	63.2	63.2	63.2
	pratom1	10	26.3	26.3	89.5
	pratom_	4	10.5	10.5	100.0
	Total	38	100.0	100.0	

Item 5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	5	13.2	13.2	13.2
Yes	33	86.8	86.8	100.0
Total	38	100.0	100.0	

Item 5 Frequencies

Sub item	Responses		Percent of Cases
	N	Percent	
5.1	14	14.7%	42.4%
5.2	16	16.8%	48.5%
5.3	21	22.1%	63.6%
5.4	22	23.2%	66.7%
5.5	7	7.4%	21.2%
5.6	5	5.3%	15.2%
5.7	8	8.4%	24.2%
5.8	2	2.1%	6.1%
Total	95	100.0%	287.9%

a. Dichotomy group tabulated at value 1.

6.1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No select	8	21.1	21.1	21.1
No. 1	20	52.6	52.6	73.7
No. 2	8	21.1	21.1	94.7
No. 3	2	5.3	5.3	100.0
Total	38	100.0	100.0	

16.2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No select _i	12	31.6	31.6	31.6
No. 1	3	7.9	7.9	39.5
No. 2	14	36.8	36.8	76.3
No. 3	9	23.7	23.7	100.0
Total	38	100.0	100.0	

16.3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No selectj	18	47.4	47.4	47.4
	No. 1	6	15.8	15.8	63.2
	No. 2	4	10.5	10.5	73.7
	No. 3	10	26.3	26.3	100.0
	Total	38	100.0	100.0	

16.4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No selectj	24	63.2	63.2	63.2
	No. 1	5	13.2	13.2	76.3
	No. 2	4	10.5	10.5	86.8
	No. 3	5	13.2	13.2	100.0
	Total	38	100.0	100.0	

16.5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No select;	29	76.3	76.3	76.3
No. 1	2	5.3	5.3	81.6
No. 2	1	2.6	2.6	84.2
No. 3	6	15.8	15.8	100.0
Total	38	100.0	100.0	

16.6

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No select;	37	97.4	97.4	97.4
No. 2	1	2.6	2.6	100.0
Total	38	100.0	100.0	

Item 7

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid D	10	26.3	26.3	26.3
C	24	63.2	63.2	89.5
B	4	10.5	10.5	100.0
Total	38	100.0	100.0	

Item 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	18	47.4	47.4	47.4
	important	18	47.4	47.4	94.7
	Little important	2	5.3	5.3	100.0
	Total	38	100.0	100.0	

Item 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	15	39.5	39.5	39.5
	important	21	55.3	55.3	94.7
	Little important	2	5.3	5.3	100.0
	Total	38	100.0	100.0	

Item 10 Frequencies

		Responses		Percent of Cases
		N	Percent	
Sub Item	10.1	12	18.8%	34.3%
	10.2	16	25.0%	45.7%
	10.3	17	26.6%	48.6%
	10.4	19	29.7%	54.3%
Total		64	100.0%	182.9%

Dichotomy group tabulated at value 1.

Item 11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	26.3	26.3	26.3
	2	14	36.8	36.8	63.2
	3	12	31.6	31.6	94.7
	4	2	5.3	5.3	100.0
Total		38	100.0	100.0	

Item 12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	18.4	18.9	18.9
	2	16	42.1	43.2	62.2
	3	14	36.8	37.8	100.0
	Total	37	97.4	100.0	
Missing	System	1	2.6		
Total		38	100.0		

Item 14 Frequencies

		Responses		Percent of Cases
		N	Percent	
Sub item	14.1	5	5.4%	13.2%
	14.2	31	33.7%	81.6%
	14.3	2	2.2%	5.3%
	14.4	26	28.3%	68.4%
	14.5	7	7.6%	18.4%
	14.6	3	3.3%	7.9%
	14.7	2	2.2%	5.3%
	14.8	11	12.0%	28.9%
	14.9	4	4.3%	10.5%
	14.10	1	1.1%	2.6%
Total		92	100.0%	242.1%

Dichotomy group tabulated at value 1.

Item 15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Individual work	2	5.3	5.3	5.3
	Pair work	7	18.4	18.4	23.7
	Group work	26	68.4	68.4	92.1
	Whole-class work	3	7.9	7.9	100.0
	Total	38	100.0	100.0	

Item 16

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Thai	1	2.6	2.6	2.6
	English and Thai	37	97.4	97.4	100.0
	Total	38	100.0	100.0	

APPENDIX C
Course Contents
English for Academic Purposes (EAP)

Unit of the course	Lesson number	Theme / Topic
1. The Environmental problems	1 2 3	<ul style="list-style-type: none"> • Global Warming • Pollution • Climate Change
2. The cycle of life	4 5	<ul style="list-style-type: none"> • Water Water! • Frogs and Toads
3. Biotechnology	6 7	<ul style="list-style-type: none"> • Gene Cloning • GMO
4. Diseases	8 9	<ul style="list-style-type: none"> • AIDS/ HIV • E. Coli disease
5. Living organisms	10 11	<ul style="list-style-type: none"> • Dinosaurs • Life on the Other Planets
6. World energy	12 13	<ul style="list-style-type: none"> • Solar Energy • Renewal Energy

APPENDIX D

CLIL Unit Plan

Goals: To develop academic reading and writing skills

Unit 1: The Environmental Problems

Level: 1st year students **Time:** 3 hours/ 3 Credits

Aims	
<ul style="list-style-type: none"> • To present the content of the unit. • To introduce the concept of environmental problems and their main features. • To make learners aware of and build on prior knowledge of environmental problems and related features. • To help learners understand that learning can be achieved in a second language. • To help learners understand the new vocabularies. • To help learners summarize the main idea in written form. 	
Criteria for assessment	
<p>Teacher, peer, and self-assessment processes will be used to assess how well learners:</p> <ul style="list-style-type: none"> • Understand environmental problems • Distinguish between different types of environmental problems • Recognize and classify problems • Identify how people adapt • Construct and use KWL chart (what I know, what I want to know, what I learned) 	
TEACHING OBJECTIVES (what I plan to teach)	
<p>Content</p> <ul style="list-style-type: none"> • Introduction of the topic. • What the environmental problems are. • Features of the environmental problems. • Human adaptation. 	<p>Cognition</p> <ul style="list-style-type: none"> • Provide learners with opportunities to understand the key concepts and apply them in different contexts. • Enable learners to identify problems in specific environmental around us. • Encourage knowledge transfer about problems and predictions using visual images. • Vocabulary building, learning and using. • Arouse learner curiosity- creative use of language and learner questions.

Culture		
<ul style="list-style-type: none"> • Identify the environmental problems of their community, country and other countries. • Become aware of the importance of respecting the environment (especially the fact of producing CO₂). • Understand that they can learn, which language they are using. 		
<p><i>Language of learning</i></p> <ul style="list-style-type: none"> • Key vocabulary: greenhouse effect, pollution, warm climate, melting, and etc. • Answer questions on the issue. • Construct complete sentences 	<p style="text-align: center;">Communication</p> <p style="text-align: center;"><i>Language for Learning</i></p> <ul style="list-style-type: none"> • Asking each other questions: What do you know about...? Can you tell me something about...? • Classifying: The different types of environmental problems are.... • Giving an opinion: The global warming can cause our world environment. 	<p><i>Language through Learning</i></p> <ul style="list-style-type: none"> • Distinguish language needed to carry out activities. • Retain language revised by both the teacher and learners. • Make use of peer explanations. • Record, predict and learn new words which arise from activities.
LEARNING OUTCOMES (What learners will be able to do by the end of the lessons)		
<p>By the end of the unit learners will be able to:</p> <ul style="list-style-type: none"> • Demonstrate understanding of the concept of the environmental problems and its related features • Distinguish the types of the environmental problems • Demonstrate that the environmental problems affect the people and things • Describe how and why people and things adapt • Classify information • Successfully engage in visual matching between concepts and images • Interpret visual information • Create their own topic related to the assigned topic • Ask and respond to wh-questions about their work • Use a class vocabulary record of new words and construct the writing process 		

Materials and Equipment

- Video clips
- Visual images
- PowerPoint Presentation
- Computer with Internet access
- Worksheets and other relevant sources

CLIL Unit plan – Teachers’ notes

TEACHING/LEARNING ACTIVITIES	
<p>Lesson 1: Global warming</p> <ul style="list-style-type: none"> • Warm up: Let’s think (Powerpoint). General overview of the unit. • Previous knowledge: Students watch a video clip to differentiate of the environmental problems especially, global warming. • Game: In order to check their comprehension, asking the questions. • Ending the lesson: Learners think about people, animal and things where they live. • Glossary: Time to think about the new words which learners don’t know. Write their reflection about global warming. 	
<p>Lesson 2: Pollution</p> <ul style="list-style-type: none"> • Starting routine: What can you remember? Questions: What is the greenhouse effect? Can you live in the factory zone? • Whole class: The Environmental problems • Handout: classifying type of problems, handout (cause/effect) + pair work • Thinking activity: discuss their city environmental problem, write about the world problems. • Ending the lesson: Search on the internet about the environmental problems article and then compare/contrast • Self-assessment 	
INSTRUMENTS FOR ASSESSMENT	
<ul style="list-style-type: none"> • Teacher monitors group and individual activities. • Learners’ interact with a partner or peers • Learners’ participation in all tasks and activities. • Learners complete information gaps. • Learners complete a self- assessment sheet. 	
SCAFFOLDING TIPS	
<p>The focus of the unit is on language: Language for the teacher</p> <ul style="list-style-type: none"> ✓ Settle down quickly please, let’s get started ✓ Let’s just recap on what we did the other day. ✓ What do you know about...? ✓ Find a partner to work with. ✓ Can you tell me something about...? ✓ You’ve worked well today. Good. 	<p>Language for learners</p> <ul style="list-style-type: none"> ✓ I think there are many type of problems. ✓ I don’t think so, because... ✓ Can you help us? ✓ Global warming is...

RESOURCES
<ul style="list-style-type: none">• Computer, projector and whiteboard.• Worksheets, pens• Dictionaries• Notebook for writing tasks
NOTES
<p>If learners are familiar with the provided content, teachers can skip unnecessary points and emphasize the difficult part of the lesson. Make sure students acquire the concept of the content and the language at the same time.</p>

Adapted from Coyle, D. (2010). CLIL: Content and Language Integrated Learning.

Cambridge University Press.

Lesson Plan: Global Warming**Level:** 1st year students**Lecturer:** Mr. Burajt Phoodokmai**Time:** 3 hours Credit 3.0**1. Objectives:**

1.1 Terminal objectives: Students will be able to read a variety of reading texts and write a simple paragraph from the passage or academic texts and develop their learning skills through various activities.

1.2 Enabling objectives:

By the end of the lesson, learners will be able to

- identify the important cause of environmental problems
- carry out an investigation into possible solutions
- extend their understanding of lexis connected to climate change and environmental issues
- present summaries of assigned reading passage and explain new vocabulary sources
- practice writing the topics relevant about the global warming affecting in their city on changes in the future by using cause/effect

2. Indicators: By the end of this lesson, students are able to integrate reading and writing skills in their field and in social occasions and locations appropriate to their community and culture.

3. Procedures

Stage	Contents
Warm up activity. (10 min)	<p><u>CLIL 4cs (Content)</u></p> <p>1. Students watch a video clip. Then they predict the topic by asking and answering the 2 questions provided by the teacher.</p> <p>2. The teacher introduces students to new vocabulary and ask them check the meaning of the words in the diagram on worksheet A.</p> <p>3. The teacher asks ss to discuss why they might be recorded in different shapes like the worksheet. Or gives them the words and organize them into six groups.</p>
Introduction to content (20 min)	<p>The teacher gives ss the word stress, this stage is an optional extra if ss want to focus on dictionary skills before the jigsaw reading activities.</p> <ul style="list-style-type: none"> • See work sheet A vocabulary, modeling the word stress in the diagram.

	<ul style="list-style-type: none"> • Worksheet B shows ss how to find the word stress in the dictionaries the class are using. Get them to find the stress for the words below and record them in a word stress table. • Ss complete their worksheet and say the words to each other after looking at the dictionary.
<p>Presentation (20 min)</p>	<p><u>4Cs (Communication)</u></p> <ol style="list-style-type: none"> 1. The teacher gives ss worksheet C with the laminated cards with more detail on the topics from worksheet A. Ss work individually by reading 1-2 cards and share information with their group by dividing the class into 6 groups and give each group 2 of cards. Explain they have to read and summarize the main information from their text. They have to find two main problems or solutions in each card. 2. The teacher asks ss to put their cards under their books and regroup them. The new group has one member from each of original group. Ask them to explain their topics to each other and make notes on worksheet A (Let ss know there is going to be the quiz later).
<p>Presentation (30 min)</p>	<p>The quiz will test ss' understanding of the texts and ensure they share information from their reading texts. The quiz will be set up like a competitive quiz, name themselves and draw up a score board.</p> <ul style="list-style-type: none"> • Make enough copies of the quiz on worksheet D for one per group. Cut up the questions and keep the piles of question. • One member of each group comes forward and takes one question. • Students turn to their group and discuss the answer and write it down. • Once the group has written their answer, a runner should take it back to teacher. Then check the answer and either accept card and give another question or reject the answer. • The winning group is first to complete all questions correctly. Ss can help check the answers to the other teams until most of the questions have been done by all teams. Then give them a copy of all articles.
<p>Practice (20 min)</p>	<p><u>4 Cs (Cognition)</u></p> <p>Talking about the future</p> <ul style="list-style-type: none"> • Ss look at the 4 sentences in worksheet E. • Elicit where to put the underlined expression. • Ask ss to put the other expressions and check as a whole class. The worksheet E is divided into three sections. Then check students' understanding.

<p>Practice (10 min)</p>	<p>Group discussion about the future- optional extra for learner training on reflective practice</p> <ul style="list-style-type: none"> • Ss put a) b) or c) next to the sentences on worksheet F. Then discuss in pairs/groups and learners make a large box (Ss can draw the box) and discuss where to put the expressions on it (worksheet G). • The teacher generate a whole class discussion at the end, send members of different groups around the tables to compare the boxes • Choose a sentence from worksheet F, then discuss about reading topics. Then write them down with new expressions. •
<p>Practice (20 min)</p>	<p>Mindmap – optional extra for students training on reflective practice The teacher allows ss to work alone or in pairs to review the information from the whole lesson and identity the results of different environmental problems. They should record the information under the headings, description, predictions and solutions. (Worksheet H) Let them access the internet and get the students to use www.imindmap.com as mindmapping tools.</p>
<p>Production (20 min)</p>	<p><u>4 Cs (Culture)</u></p> <p>The students are assigned to find some other reading texts from internet or any sources about related topics for their presentation next time. The ss must do their presentation in group for reflection of the lesson they have learned. (Teacher uses an assessment criteria)</p> <ul style="list-style-type: none"> • Students are divided into four groups. • The topics must be the related topics or relevant.
<p>Production (30 in)</p>	<ul style="list-style-type: none"> • Students work in group and practice writing a short paragraph about how to save the world or relevant topics and sustain their own community in the future. Then use the writing assessment form to evaluate the quality of writing. • Ss are asked to design a poster campaign for the protection of our world based on the particular content of the global warming in their community. Then compare a poster with your friends.

Assessment and Evaluation

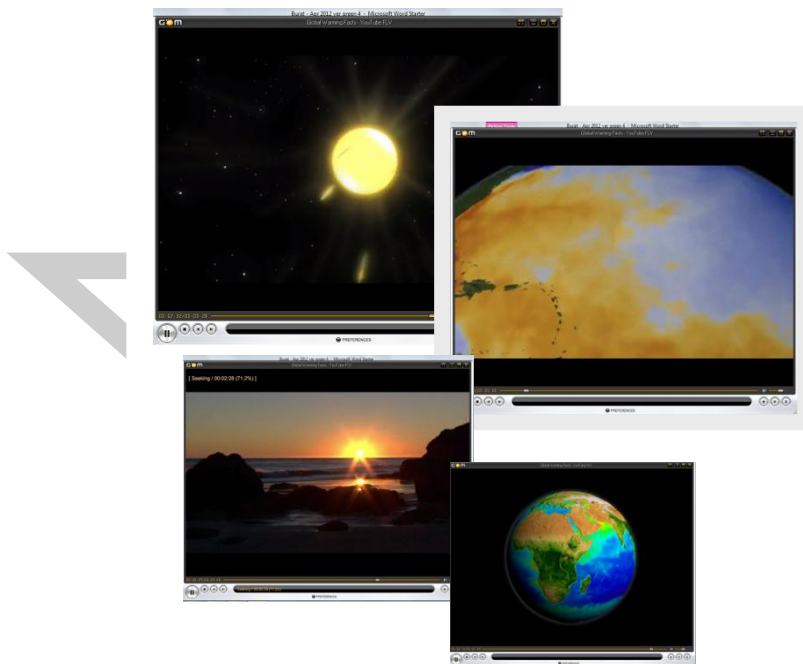
- Reading Quiz
- Peer-assessment form
- Monitoring and observation

- Homework assignment (outside reading materials from other sources, e.g. internet, magazine and newspapers. Hand in 2 days earlier before next class.
- Poster designs

Materials and Equipment

- Video clips
- Visual images
- PowerPoint Presentation
- Computer with Internet access
- Worksheets and other relevant sources

Warm up activity: *Predicting the topic*



Source: <http://youtu.be/ROZJmX73FF4>

Preview Questions

- 1. What do you see in the video clip?*
- 2. What will happen if our world gets warmer?*

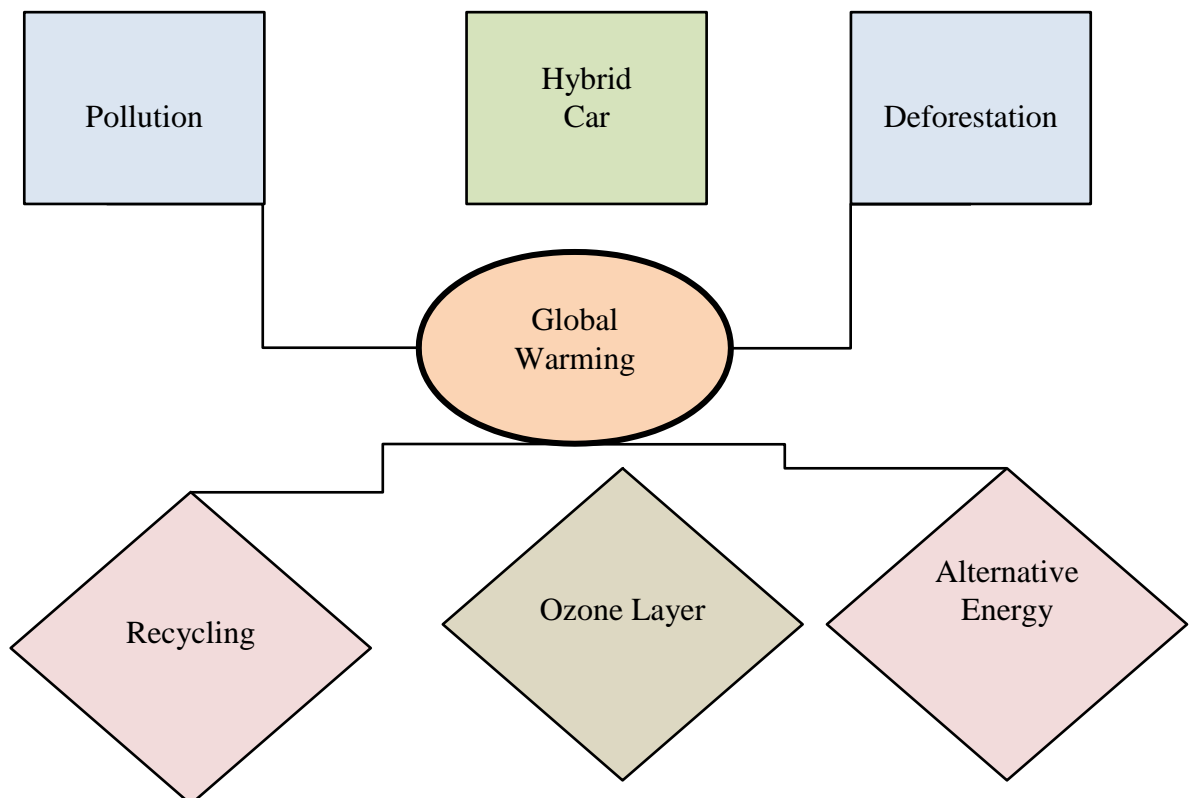
Worksheet A: Environmental Problems

Vocabulary

Can you talk about Environmental issues in English?

With a partner, try to explain the terms in the diagram below.

Why are the words divided into two groups –those in squares and those in diamonds?



- **Can you record vocabulary?**
- **Tips:**

It's good to record vocabulary in groups and in meaningful ways.

What other ways?

Worksheet B: Pronunciation- Word Stress

Look up the word alternative in your dictionary:

How does your dictionary tell you that there are 4 syllables in the word?

Is it written like this?: al ter native

The syllable underlined is the stressed syllable. Listen to your teacher say the word.

Use your dictionary to find the stressed syllable for these words and complete the table with

the stressed syllable in the dark box:

Alternative		Al	ter	na	tive
Climate			cli	mate	
Desert					
Electric					
Electricity					
Extinction					
Generation					
Global					
Polluted					
Pollution					
Radiation					
Ultraviolet					
Warming					

Worksheet C: Jigsaw Reading cards

Cut up the 6 cards and give each group 2 cards

Global Warming

Scientists say the temperature of the earth could rise by 3 degree Celsius over the next 50 years. This may cause drought in some parts of the world, and floods in others, as ice at the North and South poles begins to melt and sea levels rise.

Global warming is caused by the greenhouse effect. Normally, heat from the sun warms the earth and then escapes back into space. But carbon dioxide and other gases in the atmosphere trap the sun's heat, and this is slowly making the earth warmer.

The Ozone Layer

The Ozone layer is a layer of gas high above the surface of the earth that helps to protect it from the sun's ultraviolet radiation, which can damage our skins and cause cancer. Scientists have recently discovered holes in the Ozone Layer, caused by substances called CFCs (chlorofluorocarbons)

CFCs are used in refrigerators, aerosol cans and in the manufacture of some plastic products. Some companies now make aerosols that do not contain CFCs, and these are often marked "Ozone Friendly"

Deforestation

Rainforests help to control global warming because they absorb carbon dioxide. In recent years, large areas have been destroyed, as the trees are cut down for wood or burned to clear the land for farming. The burning releases large amounts of carbon dioxide into the atmosphere.

Many rainforests grow on poor soils, and when they are cut down or burned, the soil is washed away in the tropical rains, so that the area may turn to desert. Many plant and animal species that live there could become extinct.

Pollution

Factories, power stations and motor vehicles pump large quantities of carbon dioxide and other gases into the air. This is a major cause of the greenhouse effect. A lot of petrol contains lead, which is very poisonous and can cause brain damage in children. Most cars use unleaded petrol today and hybrid cars use batteries and petrol to use less petrol. Some poisonous gases dissolve in water in the atmosphere and then fall to the earth as acid rain. Acid rain also damages trees and buildings, and can kill fish in lakes and rivers. Rivers can also be polluted by industrial waste from factories and chemical fertilizers and pesticides used by farmers.

Alternative Energy

Most of the energy we use today comes from coal, oil and gas. But these will not last forever, and burning them is slowly harming the atmosphere. We need to look for other ways of supplying energy.

Solar Power is a way of using the sun's energy as heat or to make electricity. We can also use wind-power by building modern windmills that spin in the wind. There are several types of water-power: river water in mountainous areas can be used to generate hydroelectric power, and we can also create electricity from sea water flowing in and out with the tides.

Recycling

Recycling is the processing of used objects and materials so that they can be used again. About 60% of rubbish from homes and factories contain materials that could be recycled. Recycling saves energy and raw materials, and also reduces damage to the countryside.

Glass, paper and aluminum cans can all be recycled very easily. Many towns have special bins for bottles and cans where people can leave their empty bottles and cans for recycling. A lot of paper bags, writing paper and greeting cards are now produced on recycled paper.



Worksheet D: The Global Warming Quiz

How much do you know Global Warming that faces the world today?

Look at the quiz and try to answer the questions. Leave room for the actual answers later.

1. What are CFCs and how do they affect the environment?

.....
.....

2. What alternative forms of energy do you know?

.....
.....

3. What is the Ozone Layer? What does it do? What is happening to it?

.....
.....

4. How are forests good for the environment? What is happening to them?

.....
.....

5. What is a hybrid car? How does it help the environment?

.....
.....

6. What is acid rain?

.....
.....

7. What is recycling? How does it help the environment?

.....
.....

8. What is the Greenhouse Effect?

.....
.....



Worksheet E: Expressions

A scientist used the following sentences. How sure is he about each statement?

There's no doubt at all that the earth is getting warmer.

It's fairly certain that Earth will have heated up by 4 degrees.

There will be many other effects.

The USA and Russia could suffer from drought.

Put the expressions in the correct section of the line below.

100% Sure it will happen

.....

.....

.....

50 % Sure

.....

.....

.....

100 % Sure it won't happen

.....

.....

.....

Add these expressions to the line. Some have the same meaning and can be put side by side.

maybe

Perhaps

I'm not sure if..

definitely won't

It's possible

will

probably won't

will probably

might

I won't

I'm certain that..

I doubt that ...

Worksheet F: Discussion

What do you think? Decide if you think the following ideas:

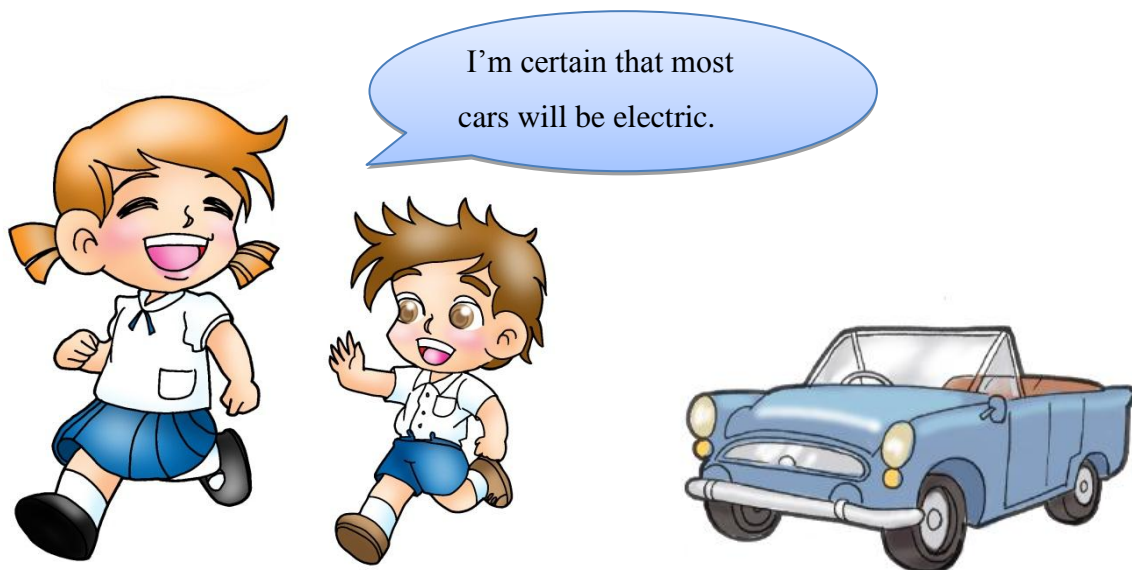
- a) will happen in the next 50 years?
- b) could happen?
- c) won't happen?

Mark the sentences a, b or c.

- 1) Most cars will be electric.
- 2) Nuclear energy will end.
- 3) Alternative energy will be more important than oil.
- 4) You will recycle all your bags, cans and paper.
- 5) Almost all the rainforests will disappear.
- 6) People will continue to sunbathe.
- 7) The climate will get worse.
- 8) The next generation will care more about the environment than the present.
- 9) In elections "Green Issues" will become more important than any other.
- 10) People will destroy the earth.

Where will you place these ideas on the line of certainty?

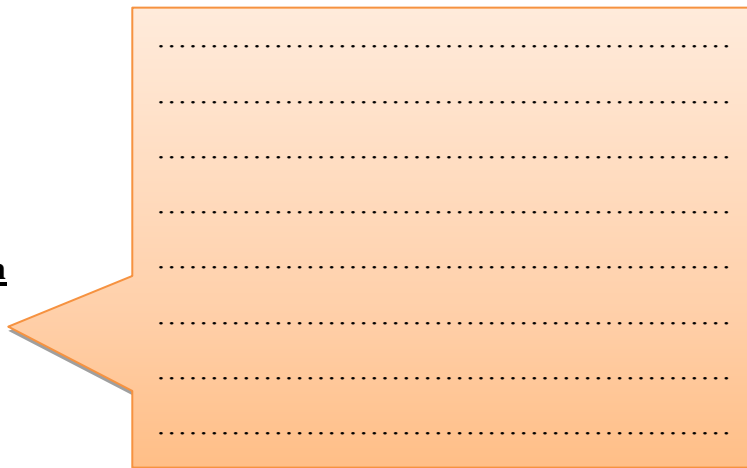
Think about which expression of certainty you can use to express your opinion.



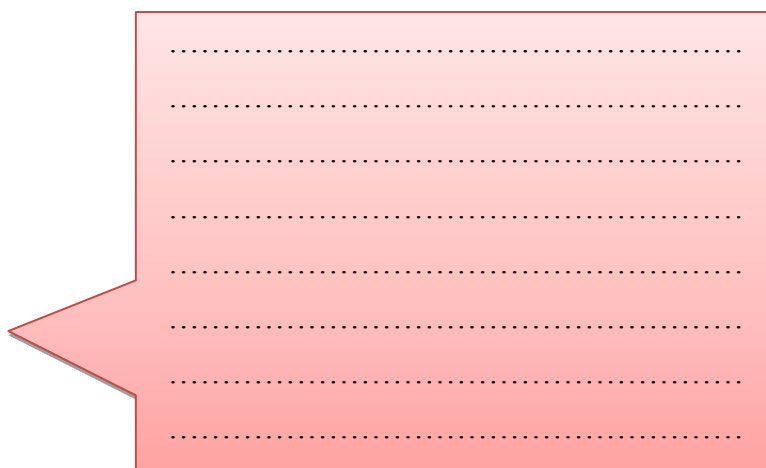
Worksheet G: Group work

Discuss with your group and decide where you want to put the ideas above. Write them with the new expressions in three different boxes.

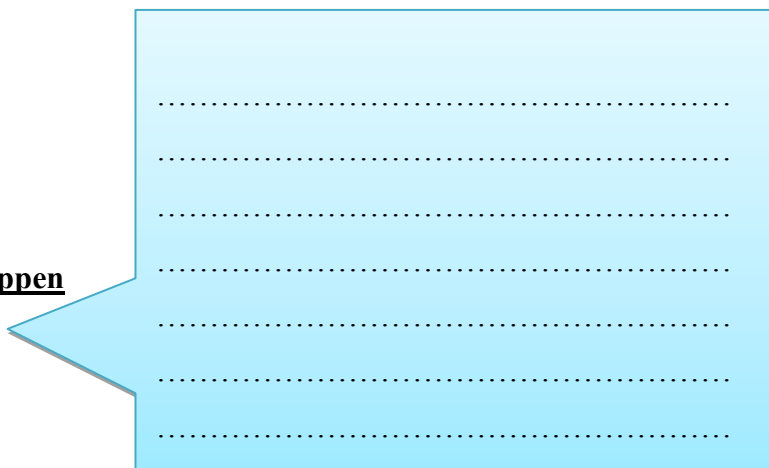
100 % Sure it will happen



50 % Sure



100 % Sure it won't happen



Worksheet H: Personal Mind map - Reflection

There's been a lot of information in this lesson. What can you remember?

Direction: Choose **one of the earlier topics** from that you are interested in, look through the different parts of the lesson and identify which vocabulary and predictions are associated with that problem.

- *Produce a mind map to help you remember the important information. Include: a title; description; predictions what will happen in the future and recommend an action.*



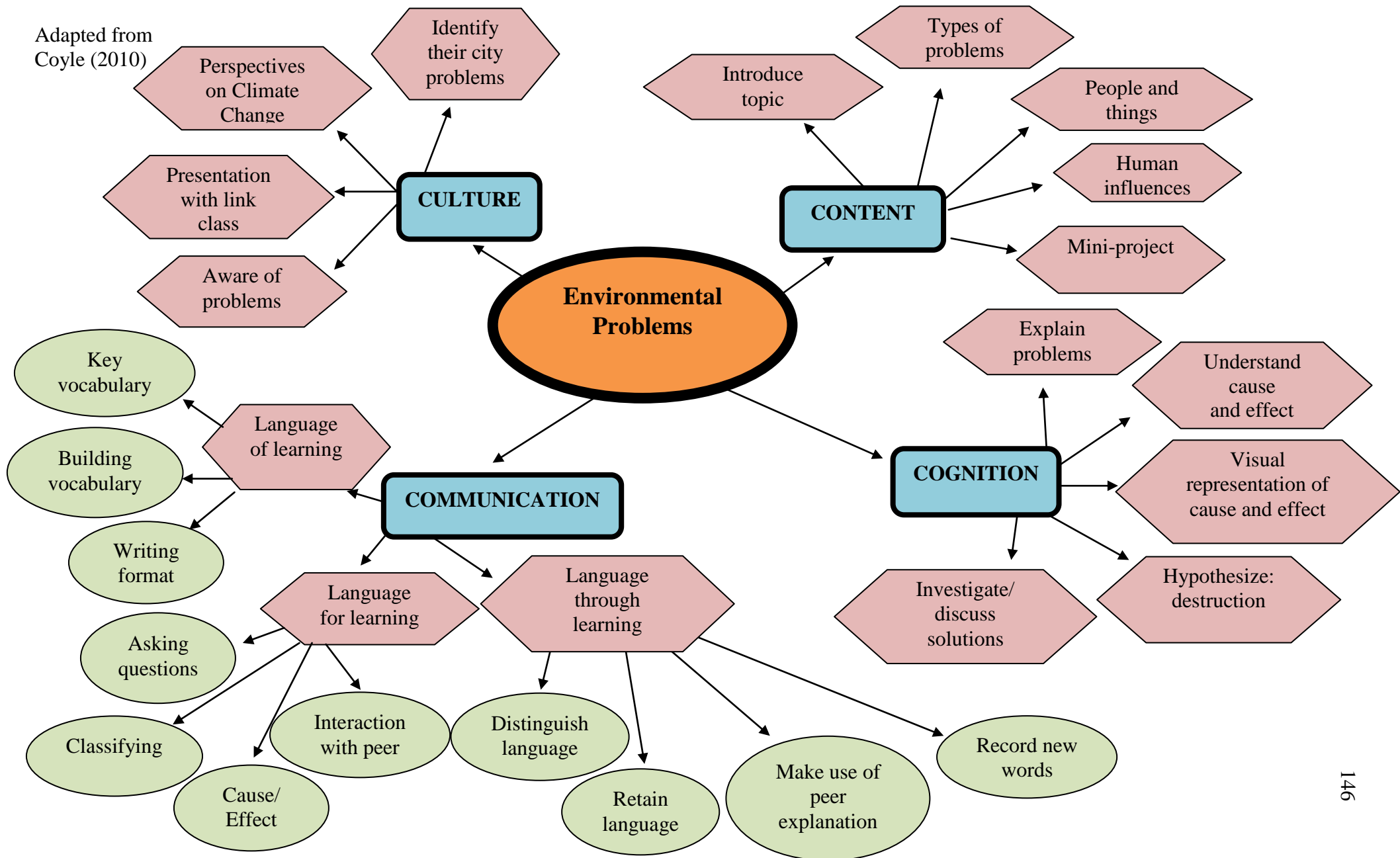
Worksheet I: A Poster Campaign

Direction: Design a poster campaign for the protection of our world based on the particular content of the environment in your community, then submit it to the teacher and compare your paper with your friends.

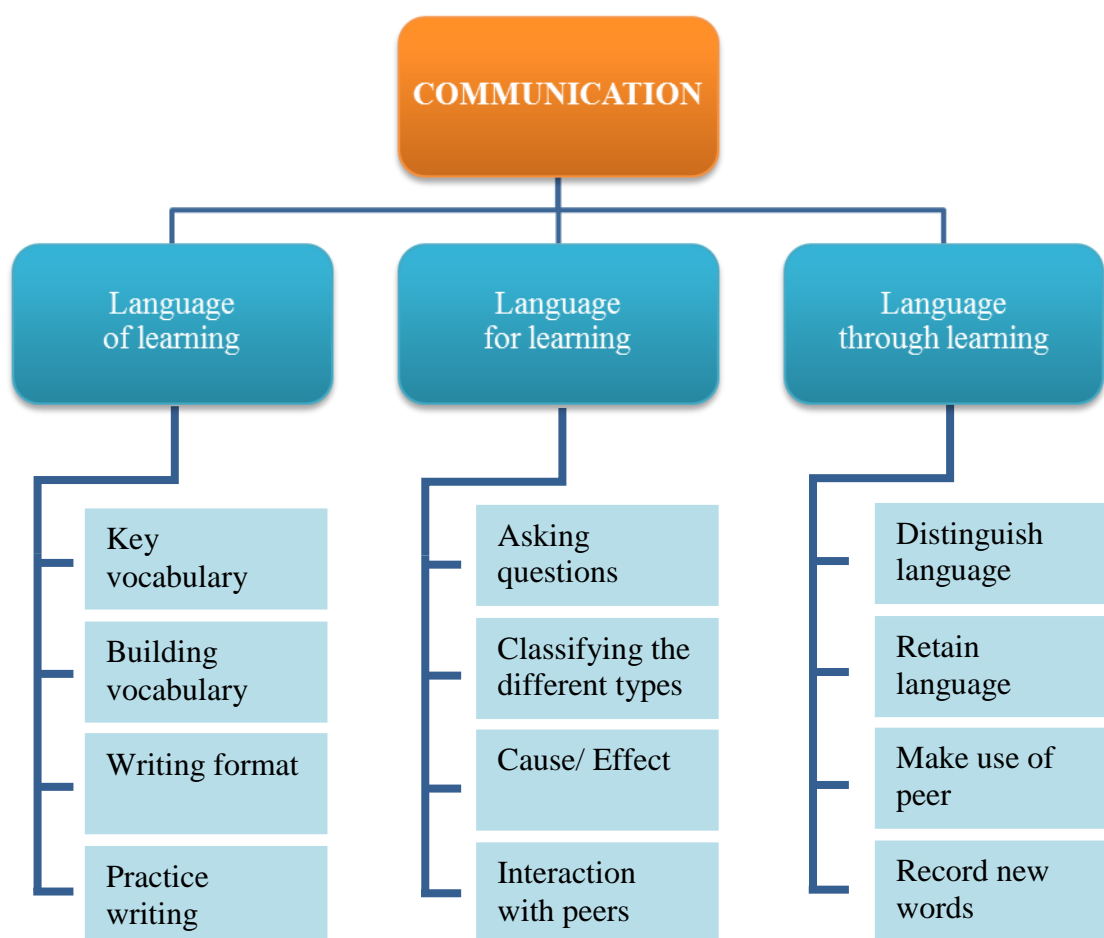
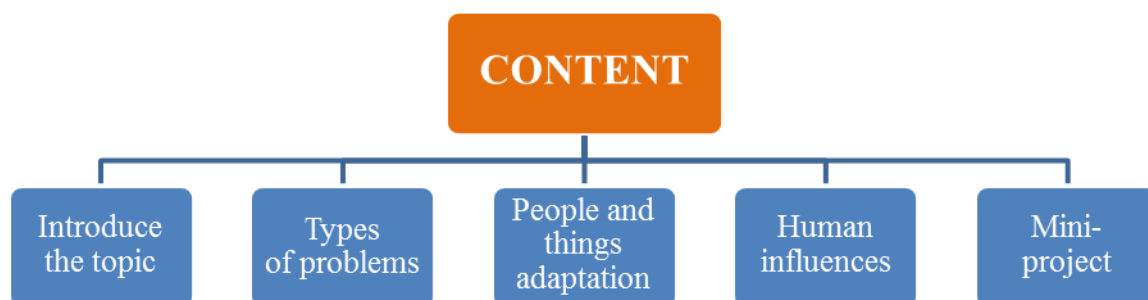


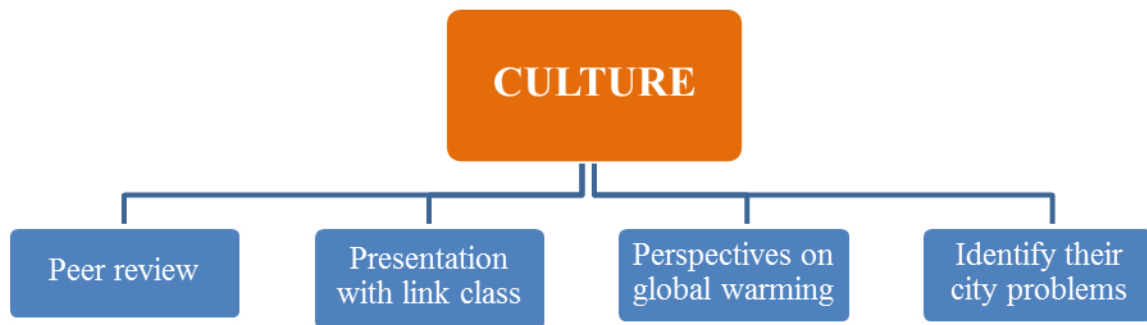
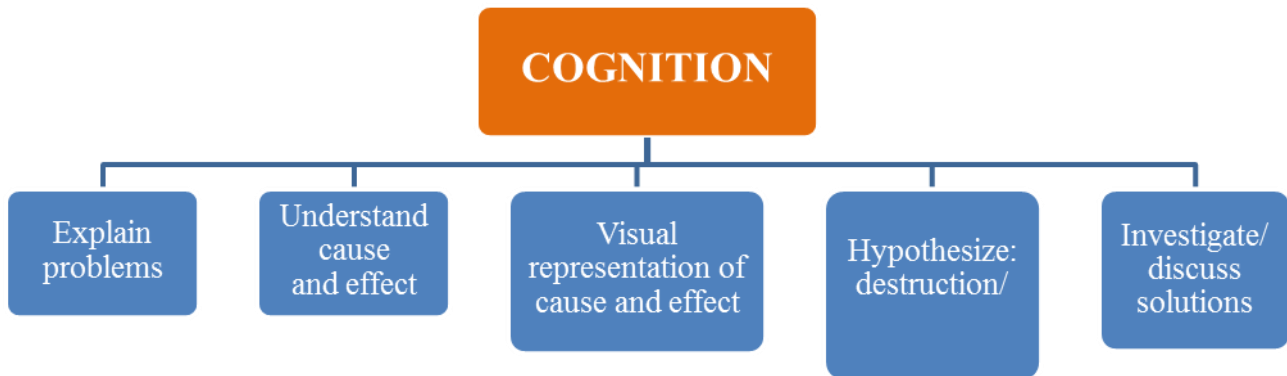
Environmental Problems Mindmap

Adapted from
Coyle (2010)



APPENDIX E
CLIL (4Cs Framework)





APPENDIX F



Course Syllabus

1. Course Number	1552499
2. Course Credit	3(3-0-6)
3. Course Title	English for Academic Purposes (EAP)
4. Department	Language Center, Office of Academic Resources and Information Technology
5. Semester	Second Semester
6. Academic Year	2/2554 (A.D. 2011)
7. Instructor	Mr. Burajt Phoodokmai
8. Condition	-
9. Status	Required course
10. Curriculum	Office of Higher Education Committee
11. Level	1 st year students
12. Hours/ Week	3 hours/ week
13. Course Description	

Develop reading and writing skills with attention to the vocabulary, expressions, grammatical structures and ways of writing exemplified in the studied texts that are closely related to the student's field of study. Focuses are on how to write an outline and a summary of the texts studied. Specifying the topics, main idea and supporting details in order to go beyond for a master level course and exchange of learning with the world community through reading and writing skills. Write summaries of studied articles and conduct research assignments related to their field of study and express their own opinions and justifying the data from various types of media for mastering academic subject knowledge and successful language skills.

14. Course Outline

By the end of the semester, students will be able to:

1. read various kinds of reading materials through reading methods such as Previewing, Predicting, Scanning, Skimming, and other techniques,
2. identify the main ideas,
3. read texts quickly,
4. identify paragraph writing and essay organization,
5. recognize grammatical structure.

15. Learning Content

Week	Contents	Activities	Materials
1	Introduction to the course and class rule	Course Preview Pre-test Whole class	PPT Handouts Achievement Test
2	Unit 1 Environmental Problems Lesson 1 Global Warming	Group Exercises Expressions Pair/ Individual	Video clip Handouts Worksheets
3	Lesson 2 Pollution	Group Exercises Cause/ Effect Pair/ Individual	Video clip Visual pictures Worksheets
4	Lesson 3 Climate Change	Note-taking Explore writing Group/ Pair work	Brochures Video clip Handouts
5	Unit 2 Cycle of Life Lesson 4 Frogs and Toads	Topic sentence Sequencing Individual/ Group	Charts Organizer Worksheets
6	Lesson 5 Water Water!	Supporting details Individual	Video clip Visual pictures Handouts Worksheets

7	Unit 3 Biotechnology Lesson 6 Gene Cloning	Reading for info Group discussion Pair work	Video clip Visual pictures Handouts
8	Lesson 7 AIDS/HIV	Classifying Group discussion Pair work	Video clip Visual pictures Handouts/ Worksheets
9	Unit 4 Diseases Lesson 8 AIDS/HIV	Individual work Paragraph writing Discussion	Video clip Visual pictures Handouts
10	Lesson 9 E. Coli disease	Reading exercise Individual/ pair	Video clip Visual pictures Handouts/ Worksheets
11	Unit 5 Living Organisms Lesson 10 Dinosaurs	Compare/ Contrast Sentence formation Pair/ Group	Video clip Visual pictures Handouts
12	Lesson 11 Life on Other Planet	Relative clauses Sentence formation Pair/ Group	Video clip Visual pictures Handouts
13	Unit 6 World Energy Lesson 12 Solar Energy	Group discussion Organizing information	Video clip Visual pictures Handouts/ Worksheets
14	Lesson 13 Renewal Energy	Writing summaries Pair/ Individual	Video clip Visual pictures Handouts
15	Conclusions	Post-test Revision of lessons	Achievement Test PPT
16	Final Examination	Whole class Summative Test	Call for paper works and Task assignments

16. Methods

- Pair work, group work or individual activities
- Brainstorming and discussion
- Presentation, simulations and searching for information

- Small group work, oral presentations, etc.

17. Media and Materials

- Transparencies
- Worksheets
- PowerPoint Media
- Electronics and Websites
- Visual pictures

18. Course Evaluation:

Evaluation		Grading Criteria	
Quiz 1-3	30%	A	90-100
Writing Assignments	15 %	B+	85-89
Reading Assignments	15%	B	80-84
Task Assignments	10%	C+	75-79
Classroom Activities	10%	C	70-74
		D+	60-69
Final Examination	20%	D	50-59
		E/F	0-49
Total	100%		

Contact Information:

Ajarn Burajt Phoodokmai (อาจารย์ บุรฉัตร ภูดอกไม้)

Language Center: ศูนย์ภาษา มหาวิทยาลัยราชภัฏอุดรธานี

Building 17, 1st floor Room # 17104

Udon Thani Rajabhat University

Tel. 0 4221 1040 ext. 747

E-mail: bu_tefl@yahoo.com

APPENDIX G

Scope and Sequence

Unit	CLIL (4Cs Framework)	Reading	Writing	Vocabulary	Grammar
1.EnvironmentalProblems <i>Lesson 1: Global warming</i> <i>Lesson 2: Pollution</i> <i>Lesson 3: Climate Change</i>	Implemented	Predict content Jigsaw reading Express opinions Organize information Identify main ideas Read for details	Answer questions Construct words Write expressions Draw a poster	Define words Word stress Science words Use idioms expressions	Expressions of certainly Cause/effect
2. Cycle of Life <i>Lesson 4: Frogs & Toads</i> <i>Lesson 5: Water! Water!</i>	Implemented	Predict content Reading comprehension Sequencing Read for information	Complete sentences Answer questions Brainstorm ideas for writing	Use context clues to find meaning Define words Classify vocabulary	The future with <i>will</i>
3. Biotechnology <i>Lesson 6: Gene Cloning</i> <i>Lesson 7: GMO</i>	Implemented	Predict content Identify main ideas Read for details Express opinions	Complete sentences Complete a short paragraph	Find word associations Classify vocabulary Define words	Simple past of be and have

4. Diseases <i>Lesson 8: AIDS/HIV</i> <i>Lesson 9: E. Coli</i>	Implemented	Predict content Read for information Make inferences Express opinions	Write a paragraph Answer questions Write sentences	Define words Classify vocabulary Use context clues to find meaning	The present simple <i>Active/Passive</i> <i>Voices</i>
5. Living Organisms <i>Lesson 10: Dinosaurs</i> <i>Lesson 11: Life on other planet</i>	Implemented	Predict content Identify main ideas Read for details Express opinions Organizing information	Answer questions Write a paragraph about the planet Complete sentences	Define words Use context clues to find meaning	<i>There is/ There are</i>
6. World Energy <i>Lesson 12: Solar Energy</i> <i>Lesson 13: Renewal Energy</i>	Implemented	Predict content Read for details Identify main ideas Express opinions	Use space order Make a list Complete sentences Write a paragraph about alternative energy	Define words Classify Vocabulary Use context clue to find meaning	The simple past

Remarks: CLIL, 4Cs framework consists of content, communication, cognition, and culture.

APPENDIX H

Samples of students' work

Tupaporn Yansiri 54040254131
 Supawan BoonThep 61010254112

14

Worksheet H
 Personal Mindmap - Reflection

There's been a lot of information in this lesson. What can you remember?

Choose **one of the topics** from earlier that you are interested in, look through the different parts of the lesson and identify which vocabulary and predictions are associated to that problem.

Produce a mindmap to help you remember the important information.

Include: a title; description; predictions what'll happen in the future and recommended action.

```

graph TD
    GW((global warming)) --> C[Cause]
    GW --> R[Remedy]
    C --> GEE[The greenhouse effect]
    C --> PB[Plastic bags, too]
    C --> CDC[Drive carbon dioxide]
    C --> ETC[etc]
    C --> DEF[deforest]
    C --> H[human]
    R --> RFC[Reduce fuel consumption]
    R --> REC[Recycle]
    R --> GT[grow tree]
    R --> UCB[Use cloth bags]
    R --> OAC[open air 25 conditioner]
    R --> UBC[Use bicycles instead of cars]
    R --> RECEN[Reduce energy consumption]
  
```

Jitarat Nawasiri 540A0254111/11

Jitaward Sunthong 540A0254113/13

14

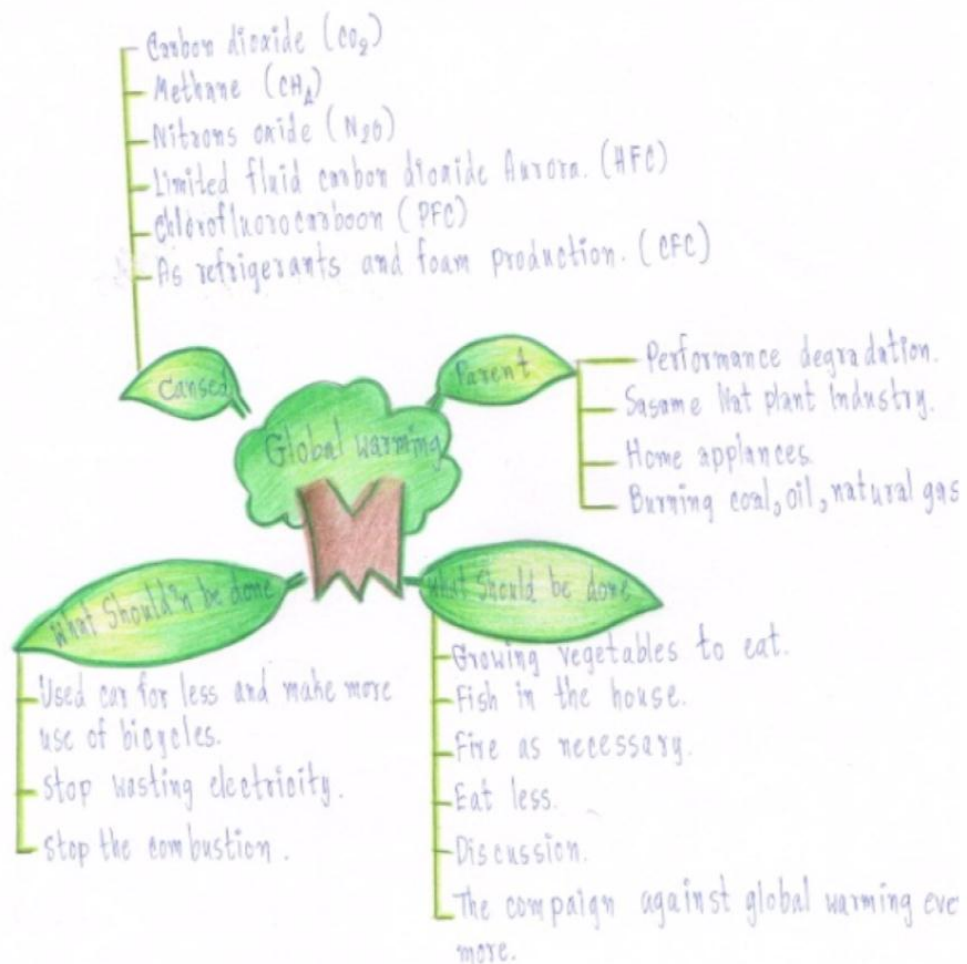
Worksheet H**Personal Mindmap - Reflection**

There's been a lot of information in this lesson. What can you remember?

Choose **one of the topics** from earlier that you are interested in, look through the different parts of the lesson and identify which vocabulary and predictions are associated to that problem.

Produce a mindmap to help you remember the important information.

Include: a title; description; predictions what'll happen in the future and recommended action.



APPENDIX I

ACHIEVEMENT TEST**English for Academic Purposes (EAP:1552499)**

Name	Student ID.
-------------	--------------------

Time: 1.30 Hours**Instructions:**

1. Write your name and student's number in the blank spaces.
2. Answer all questions.
3. Write your answers clearly on the separate answer sheets.
4. At the end of the examination, you should hand in both the question paper and the answer sheet.

INFORMATION FOR TEST TAKERS**READING:** Part 1- 4 (4A & 4B) Questions 1-35 (35 points)**WRITING:** Part 1 Rewrite complex sentences 1-10 (20points)

Part 2 Write a paragraph (5 points)

TOTAL: 60 points**Remarks:** This test is used for **Science** students only.

Reading

Part 1: Read paragraph A and B carefully. Then circle the correct answer. (A; Questions 1-5) and (B; Questions 6-10).

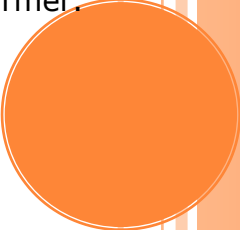
A: What is Global warming?

Global warming scientists say the temperature of the earth could rise by 3°C over the next 50 years. This may cause drought in some parts of the world, and floods in others, as ice at the North and South poles begins to melt and sea levels rise. Global warming is caused by the greenhouse effect. Normally, heat from the sun warms the earth and then escapes back into space. But carbon dioxide and other gases in the atmosphere trap the sun's heat, and this is slowly making the earth warmer.

1. What is Global Warming?
 - a. The changing of the earth's climate.
 - b. The temperature is rising up and down.
 - c. The sun is getting close to the earth.
 - d. There are lots of gases in the atmosphere.

 2. Which of the following sentences can cause the global warming?
 - a. The heating up of the earth.
 - b. The sea levels are rising.
 - c. The forests are drying.
 - d. All are correct.

 3. What will happen for the next 50 years according to the paragraph?
 - a. The ice at the North and South poles begin to melt.
 - b. There will be no more oxygen but more gases.
 - c. The earth' temperature could rise by 3 and up to 50 degrees Celsius.
 - d. The heat of sun is rising and quickly making the earth warmer.

 4. Which of the following statements is NOT mentioned in the paragraph?
 - a. The temperature of the earth could rise over 3 degrees.
 - b. Ice could be melted because of the temperature change.
 - c. The Greenhouse effect is caused by the Global warming.
 - d. Carbon dioxide and other gases are trapped by the sun's heat.
- 

5. How do you think we could help to stop global warming?
- Reducing CO₂ and other gases
 - Recycling materials
 - Planting more trees
 - All the above

B: What is Climate change?

To understand climate change, it's important to recognize the difference between weather and climate. Weather is the temperature, precipitation (rain, hail, sleet and snow) and wind, which change hour by hour and day by day. Climate is the average weather and the nature of its variations that we experience over time.

The greenhouse effect is the natural process of the atmosphere letting in some of the energy we receive from the Sun (ultraviolet and visible light) and stopping it from being transmitted back out into space (infrared radiation or heat). This makes the Earth warm enough for life.

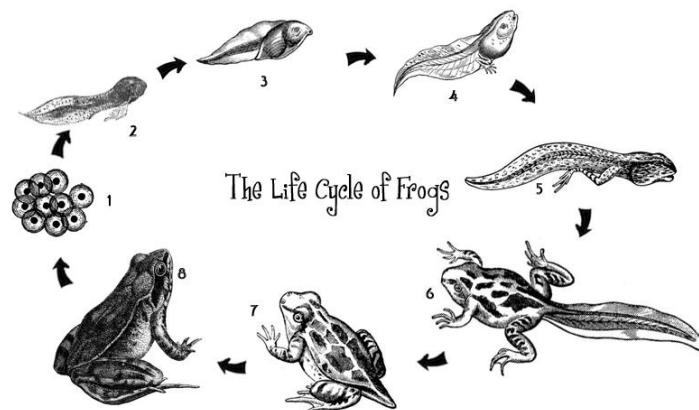
For several thousands of years the atmosphere has been delicately balanced, with levels of greenhouse gases relatively stable. Human influence has now upset that balance and, as a result, we are seeing climate change.

6. What is climate change?
- The difference of the average weather.
 - The natural process of the atmosphere.
 - The greenhouse effect process.
 - The normal weather temperature.
7. What does "precipitation" mean?
- temperature
 - rainfall, hail, and snow
 - atmosphere
 - clouds and stars
8. How do humans influence climate change?
- Cars pollute more gases
 - Cutting down the trees
 - Burning the garbage
 - All are correct.
9. What will happen if there are too many gases in the atmosphere?
- It may cause water pollution.
 - It will bring different types of diseases.
 - It will be raining hard.
 - It will increase the greenhouse effect.

10. How do we use the energy from the sun?
- To sunbathe
 - To warm the oceans and land
 - For visible light
 - All the above.

Part 2: Reading comprehension: Life Cycle of Frogs

Direction: Read the paragraph below and use the Life Cycle of Frogs diagram to label the paragraphs 11-18



	As tadpoles grow, the gills become covered with skin. The tadpoles use their pointed mouth to stick to plants and rocks. They eat algae. Camouflage is their only protection.
	With its tail completely reabsorbed, an adult frog can now live on land but usually stays near water because it needs to keep its skin moist. Adult frogs also return to the water to lay eggs.
	Tadpoles come from eggs. The eggs need to be kept moist so the adult frogs usually lay them in water. The eggs are grouped together in egg masses called egg sacks or frogspawn. The tadpoles wiggle inside the eggs until they can break out.
	The front legs develop and the tadpole looks more and more like a frog every day. At this stage, it is called a 'froglet'.
	The back legs begin to sprout first. The tadpole starts to swim occasionally, but mostly stays attached to plants and rocks. The mouth also begins to widen.

24. A gas condenses into a liquid when it is.....
- a. warmed
 - b. boiled
 - c. cooled
 - d. moistened
25. Which of these is not a part of the water cycle?
- a. The sun evaporates water on the Earth's surface into water vapor.
 - b. The water vapor rises, cools and condenses into clouds.
 - c. When it rains, the water runs uphill to the mountains.
 - d. Both a. and b. are correct.
26. What is NOT a type of precipitation when water falls from the clouds?
- a. hail
 - b. gale
 - c. sleet
 - d. snow

Part 4: Reading for Information

Human Cloning

What is Human Cloning?

Cloning an organism involves replicating the DNA of that organism in a new organism that, as a result, has the same exact features and characteristics. Human Cloning would mean recreating the person that is being cloned. With the successful cloning of Dolly The Sheep, Human Cloning, long the staple of science fiction, is on the verge of becoming a reality.

How would Human Cloning work?

Human Cloning, if it is ever done, will be carried out by the same method that brought forth Dolly, Reproductive Cloning.

In Reproductive Cloning, the nucleus is removed from a body cell of the organism to be cloned and this nucleus is inserted into an enucleated egg, that is, an egg whose nucleus has previously been removed.

The egg with the new nucleus is then treated to electric or chemical treatment to simulate cell division. The resulting embryo is transferred to a host uterus to develop properly and eventually be given birth to.

The new-born organism will be a replica of the original organism, but not the exact same actually, since it will have DNA derived from both the organism as well as the egg.

Source: <http://www.buzzle.com/articles/human-cloning>

4A Direction: *Answer the questions by extracting from the texts.*

27. What is human cloning?
- a. Recreating a person with the same features
 - b. Recreating a person with the same features and characteristics
 - c. Reproducing two people with the scientific process
 - d. Reproducing one person with the scientific process
28. What is the difference between natural reproduction and cloning?
- a. Reproduction takes more time than cloning.
 - b. Reproduction takes less time than cloning.
 - c. Reproduction is derived from a different egg.
 - d. Reproduction is derived from the same egg.
29. How is human cloning done?
- a. It can be done the same as in animals.
 - b. It can produce a new cell.
 - c. It can allow you to order designer babies.
 - d. All the above.
30. What are the advantages of cloning?
- a. It can be used to produce new species.
 - b. It can be used to treat some diseases.
 - c. It can help people do more activities.
 - d. None of the above.
31. What are the disadvantages of cloning?
- a. It cannot live long.
 - b. It might have health problems.
 - c. There will be many moral problems.
 - d. All are correct.



4B Direction: Put **True** or **False (T or F)** in the box for the suitable statement below.

	32. Human cloning probably means recreating the person that is being cloned.
	33. Human cloning will not be used the same way as the Dolly cloning method.
	34. Cloning could also be used to treat cancer and the other illnesses.
	35. Some countries like USA and UK allow reproductive cloning.

Writing

Part 1: Rewrite complex sentences (36-45)

Here are some sentences using expressions in different conditions. Rewrite and Use clause connection with the linking expressions given in the brackets.

Example:

HIV/AIDS can be found most everywhere in the world. Africa continues to be the hardest hit. (yet)

HIV/AIDS can be found most everywhere in the world, **yet** Africa continues to be the hardest hit.

36. Rainfall in Thailand is often quite plentiful in the rainy season. It is not enough to sustain intensive agriculture. (although)

.....

.....

37. **Reiya** does not have enough money. She wants to buy the latest car. (Despite the fact that)

.....

.....

38. AIDS patients want to buy anti-virus drugs to prolong their lives. These drugs are too expensive for them. (however)

.....

.....

39. **Nadet** had a serious lung problem from smoking. The doctor refused to perform any operation for him. (but)

.....

40. HIV patients have been living in the village of *Kamchanod* for over a decade. The villagers still considered them to be outsiders. (nevertheless)

.....

41. chest and lung diseases
 sulphur dioxide and nitrogen oxides (lead to)

.....

42. there are ocean tides
 the moon's gravitational pull (as a result of)

.....

43. central air-conditioning system in hospitals
 respiratory diseases (result in)

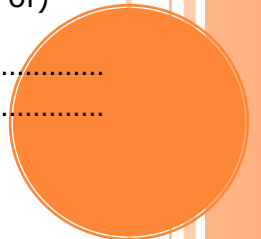
.....

44. the ozone depletion
 the crop yields have been reduced (due to)

.....

45. our lung work effectively
 the reduction of carbon monoxide in the air (because of)

.....



Part 2: Write a paragraph

46. Direction: Write a paragraph about "**What would you do to stop Global warming?**" Write at least three supporting ideas with details for this topic. Remember to include a topic sentence at the beginning of the paragraph and a concluding sentence at the end.

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Good luck!



ANSWER SHEET
ACHIEVEMENT TEST
English for Academic Purposes (1552499)

Name.....**ID. No**.....

Instructions

For Reading

1. Circle the best answer for Part 1, 3 and 4A
2. Put the correct number in order for Part 2
3. Put T or F for Part 4B



Part 1 Circle the best answer.

Part 1				
1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
4.	a	b	c	d
5.	a	b	c	d
6.	a	b	c	d
7.	a	b	c	d
8.	a	b	c	d
9.	a	b	c	d
10.	a	b	c	d

Part 2 Put the correct number in order.
(11-18)

Part 2

Part 3 Circle the best answer.

Part 3				
19.	a	b	c	d
20.	a	b	c	d
21.	a	b	c	d
22.	a	b	c	d
23.	a	b	c	d
24.	a	b	c	d
25.	a	b	c	d
26.	a	b	c	d

Part 4A Circle the best answer.

Part 4A				
27.	a	b	c	d
28.	a	b	c	d
29.	a	b	c	d
30.	a	b	c	d
31.	a	b	c	d

Part 4B True or False (32-35)

Part 4B	
32.	
33.	
34.	
35.	

Instructions for Writing:**Part 1: Write your answers clearly in the spaces provided.**

Part 1: Write your answer below.	
36.	
37.	
38.	
39.	
40.	
41.	
42.	
43.	
44.	
45.	

Part 2: Write a paragraph with a topic sentence and 3 supporting details.
46. "What would you do to stop global warming?"

APPENDIX J

Observation Form

Direction: Please make a check for the following Fifteen items of observable behaviors in classroom activities to see the students' engagement.

Scale: Never = 1, Rarely = 2, Most of the time = 3, Always = 4

Teaching and Learning Procedures	Students' Behaviors	Frequency of time			
		Never 1	Rarely 2	Most of time 3	Always 4
<p>➤ Warm Up Activity</p> <p>Introduction to Content</p>	<ol style="list-style-type: none"> 1. Students ask the questions about the unknown topic at the beginning. 2. Students answer the simple questions that related to the topic. 3. Students follow the teachers' instruction appropriately. 4. Students pay more attention while doing class activities. 				
<p>➤ Presentation Stage</p> <p>(Communication)</p>	<ol style="list-style-type: none"> 5. Students work in group for reading assignment completely. 6. Students communicate with teacher and peers using medium language. 7. Students take note when the teacher gives an explanation. 				

	8. Students do the exercises completely after finished each session.				
➤ Practice Stage (Cognition)	9. Students summarize the story after reading with a simply paragraph writing. 10. Students predict unknown words correctly. 11. Students demonstrate what they have learned appropriately. 12. Students express and share their opinions among friends.				
➤ Production Stage (Culture)	13. Students create their own topics into a written paragraph properly. 14. Students make the presentation of new concepts of the topic clearly. 15. Students promote awareness of cultural difference/global citizenship.				

Remarks: CLIL with 4Cs framework consists of Content, Communication, Cognition and Culture

APPENDIX K

Learning Log

Direction: *Please write down your statement with the following questions regarding the EAP (English for Academic Purposes) course using CLIL approach.*

1. What did you learn in class today?

.....
.....
.....

2. How do you feel about the activities provided by the teacher?

.....
.....
.....

3. Are classroom activities useful for your reading and writing skills?

.....
.....
.....

4. How would you apply what you have learned to your major subject area?

.....
.....
.....

Thank you for your time.

APPENDIX L

Samples of learning log

Learning Logs

Direction: Please write down your statement with the following questions regarding the EAP (English for Academic Purposes) course.

1. What did you learn in class today?

I learned about water cycle
and frogs

2. How do you feel about the activities provided by the teacher?

I happy and love
I enjoy study very much

3. Are activities useful for your reading and writing skills?

Yes, I use for reading and
writing skills

4. How would you apply what you have learned to your major subject area?

I apply in my study and major
I learned about biotechnology

Thank you for your time.

Learning Logs

Direction: Please write down your statement with the following questions regarding the EAP (English for Academic Purposes) course.

1. What did you learn in class today?

I learned about pollution. Moreover, I have known what causes of pollution in real life.

2. How do you feel about the activities provided by the teacher?

I think the activities are useful and interesting because they enable me to read and write more clearly and accurately.

3. Are activities useful for your reading and writing skills?

Yes they are. The activities can enhance my reading and writing skills.

4. How would you apply what you have learned to your major subject area?

I can apply the vocabulary that I have learned in class in my writing especially in science and biotechnology.

Thank you for your time.

APPENDIX M

Lists of Experts

A. Experts validating Unit plan/ Lesson plan and the Achievement test

1. Orapin Nasawang
Language Center, Office of Academic Resources and Information
Technology, Udon Thani Rajabhat University
2. Supatra Wanpen, Ph.D.
Faculty of Humanity and Social Science
Udon Thani Rajabhat University
3. Paul Cooke (New Zealander)
Language Center, Office of Academic Resources and Information
Technology, Udon Thani Rajabhat University

B. Experts validating Observation form

1. Donald Travis
Language Center, Office of Academic Resources and Information
Technology, Udon Thani Rajabhat University
2. Paul Davis (English)
Language Center, Office of Academic Resources and Information
Technology, Udon Thani Rajabhat University
3. Orapin Nasawang
Language Center, Office of Academic Resources and Information
Technology, Udon Thani Rajabhat University

C. Experts Validating Learning log

1. Christopher Frey (American)

Language Center, Office of Academic Resources and Information
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APPENDIX N

Research Instruments Evaluation Form

Direction: Please evaluate the attached research instruments for implementing an EAP course using CLIL by put the check mark on the column below with the suggestions or comments.

Rating; **1 = acceptable** **0 = weak** **-1 = unacceptable**

Descriptions	Rating			Suggestions or Comments
	1	0	-1	
1. Needs Analysis Questionnaire				
• Questions are clear and easy to understand.				
• Questions are purposeful and support the study.				
• Questions content are well constructed.				
• The language use is appropriate for participants.				
2. Achievement Test				
• Content allows students to demonstrate their knowledge.				
• Contents are purposeful and support the study.				
• Contents are well constructed.				
• Sequencing of topics are well organized.				
• Topics are appropriate for level of students.				
• Variety of the tests is appropriate.				
• Language use is appropriate for students				
3. Unit Plan / Lesson Plan				
3.1 Topic of the unit and the lesson				
3.1.1 Topic of the lesson is appropriate and clear.				

3.1.2 Topic of the lesson is organized effectively.				
3.2 Objectives:				
3.2.1 Objectives are clear and concise.				
3.2.2 Objectives are relevant and consistent with the content of the lesson.				
3.3 Materials and worksheets				
3.3.1 Teaching materials and worksheets are appropriate for the lesson.				
3.3.2 Worksheets and materials are linked with the topics.				
3.4 Teaching stages				
3.4.1 Stages of teaching are appropriately sequenced.				
3.4.2 Stages of teaching are clear and effective.				
3.5 Activities				
3.5.1 Activities are practical.				
3.5.2 Activities incorporate students work in various situations.				
4. Observation Form				
• Language use is appropriate for the observation.				
• Observable checklists are adequate to measure students' engagements.				
• Sequencing checklists are well organized.				
• Checklists are appropriate to the lessons.				
5. Learning log				
• Questions are appropriate for level of students.				
• Questions encourage students to write effectively.				
• Questions are useful and supportive the study.				
• Questions are beneficial and meaningful for students.				

Comments:

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APPENDIX O

The construct validity of the Achievement Test for EAP course

Item	Expert			Total	Meaning
	A	B	C		
1	+1	+1	+1	1	Reserved
2	+1	+1	+1	1	Reserved
3	+1	+1	+1	1	Reserved
4	+1	+1	0	0.67	Reserved
5	+1	+1	+1	1	Reserved
6	+1	+1	+1	1	Reserved
7	+1	+1	+1	1	Reserved
8	+1	0	+1	0.67	Reserved
9	+1	0	+1	0.67	Reserved
10	+1	+1	+1	1	Reserved
11	+1	+1	+1	1	Reserved
12	+1	+1	+1	1	Reserved
13	+1	+1	+1	1	Reserved
14	+1	+1	+1	1	Reserved
15	+1	+1	+1	1	Reserved
16	+1	+1	+1	1	Reserved
17	+1	+1	+1	1	Reserved
18	+1	+1	+1	1	Reserved
19	+1	0	+1	0.67	Reserved
20	+1	+1	+1	1	Reserved
21	+1	+1	+1	1	Reserved
22	+1	+1	+1	1	Reserved
23	0	+1	+1	0.67	Reserved
24	+1	+1	+1	1	Reserved
25	+1	+1	0	0.67	Reserved
26	+1	+1	0	0.67	Reserved
27	+1	+1	+1	1	Reserved
28	+1	+1	+1	1	Reserved
29	0	+1	+1	0.67	Reserved
30	+1	+1	+1	1	Reserved
31	+1	+1	+1	1	Reserved
32	+1	0	+1	0.67	Reserved
33	+1	+1	+1	1	Reserved
34	+1	+1	+1	1	Reserved
35	+1	+1	+1	1	Reserved
36	+1	+1	+1	1	Reserved

37	+1	+1	+1	1	Reserved
38	+1	+1	+1	1	Reserved
39	+1	0	+1	0.67	Reserved
40	+1	+1	+1	1	Reserved
41	+1	+1	+1	1	Reserved
42	+1	+1	+1	1	Reserved
43	+1	+1	+1	1	Reserved
44	+1	+1	+1	1	Reserved
45	+1	+1	+1	1	Reserved
46	+1	+1	0	0.67	Reserved

APPENDIX P

Pre-test and Post-test Results for EAP course

No.	Pre-test	Post-test	Diff
1	26.50	31.00	4.50
2	20.50	29.00	8.50
3	13.50	31.00	17.50
4	16.50	24.00	7.50
5	15.00	20.00	5.00
6	16.50	23.00	6.50
7	13.00	28.00	15.00
8	18.50	25.00	6.50
9	20.50	32.00	11.50
10	24.00	35.00	11.00
11	26.00	28.00	2.00
12	9.00	23.00	14.00
13	13.50	26.00	12.50
14	24.50	29.00	4.50
15	19.50	26.00	6.50
16	16.50	25.00	8.50
17	27.50	37.00	9.50
18	27.00	31.00	4.00
19	31.00	27.00	-4.00
20	16.50	34.00	17.50
21	30.00	34.00	4.00
22	28.50	28.00	-.50
23	18.00	23.00	5.00
24	18.50	36.00	17.50
25	16.50	22.00	5.50
26	15.50	26.00	10.50
27	17.00	22.00	5.00
28	24.50	34.00	9.50
29	22.50	32.00	9.50
30	13.00	16.00	3.00
31	18.00	24.00	6.00
32	19.50	21.00	1.50
33	18.00	20.00	2.00
34	20.50	35.00	14.50
35	13.50	16.00	2.50
36	7.00	24.00	17.00
37	11.00	18.00	7.00

Pre-test and Post-test scores in each section

No.	Pre-test	Reading					Writing		Post-test	Reading					Writing	
		P1	P2	P3	P4A	P4B	P1	P2		P1	P2	P3	P4A	P4B	P1	P2
1	26.5	7	5	4	1	1	8.5	0	31	6	3	4	3	2	8	5
2	20.5	4	2	2	1	3	8.5	0	29	7	2	1	4	2	10	3
3	13.5	2	2	1	0	2	6.5	0	31	8	3	1	1	0	18	0
4	16.5	4	4	4	0	0	4.5	0	24	7	2	4	1	3	6	1
5	15	5	1	3	1	2	3	0	20	2	0	1	1	2	10	4
6	16.5	6	1	4	0	0	5.5	0	23	5	1	2	4	3	7	3
7	13	3	1	0	3	3	3	0	28	5	3	1	3	3	14	1
8	18.5	2	1	1	3	2	9.5	0	25	4	3	1	3	2	12	0
9	20.5	6	0	3	3	1	7.5	0	32	7	3	4	3	1	14	0
10	24	7	0	1	3	1	12	0	35	9	3	2	2	3	12	4
11	26	5	1	5	2	2	11	0	28	3	0	4	1	4	14	2
12	9	2	2	0	0	2	3	0	23	2	1	5	2	3	8	0
13	13.5	6	1	2	0	3	1.5	0	26	6	2	2	0	1	14	1
14	24.5	5	2	4	1	2	10.5	0	29	5	3	3	0	2	14	2
15	19.5	6	0	2	2	0	9.5	0	26	6	1	5	3	1	6	4
16	16.5	4	1	0	2	4	5.5	0	25	3	2	0	3	1	14	1
17	27.5	9	2	4	2	0	10.5	0	37	8	3	6	3	1	12	4
18	27	3	1	5	4	3	11	0	31	6	3	3	1	1	14	3
19	31	7	2	5	1	4	12	0	27	5	4	2	1	3	10	2
20	16.5	9	0	4	0	0	1.5	2	34	10	3	2	3	3	12	0
21	30	7	1	2	3	1	13	3	34	8	3	2	3	2	12	4
22	28.5	8	3	4	1	3	9.5	0	28	8	3	3	3	2	8	1
23	18.0	6	2	3	2	3	7	0	23	5	1	1	4	2	8	2
24	18.5	6	1	3	2	0	6.5	0	36	5	5	5	1	2	15	3
25	16.5	4	0	2	2	3	5.5	0	22	5	0	2	2	2	6	5
26	15.50	3	3	3	1	0	5.5	0	26	5	1	3	4	3	9	3
27	17	4	0	2	1	0	10	0	22	8	2	3	3	0	4	2
28	24.5	7	3	3	1	0	10.5	0	34	7	5	3	2	2	14	3
29	22.5	2	1	2	3	2	12.5	0	32	6	5	5	0	2	14	0
30	13	6	0	2	2	3	0	0	16	5	2	4	2	2	0	1
31	18	6	1	1	3	1	6	0	24	5	3	3	2	1	8	2
32	19.5	6	1	2	1	2	7.5	0	21	4	1	3	2	2	8	1
33	18	3	0	2	2	3	8	0	20	5	0	1	3	3	6	2
34	20.5	6	0	2	3	2	7.5	0	35	7	3	5	3	3	10	4
35	13.5	3	1	1	0	1	7.5	0	16	4	1	1	1	1	8	2
36	7	4	0	2	0	1	0	0	24	6	1	3	1	1	10	2
37	11	2	2	1	1	2	3	0	18	6	2	0	2	3	0	2

Remarks: P = Part

Student no. 44 dropped out the class in the middle of the course.

APPENDIX Q

EAP Course Evaluation Sheet

No.	Class Activities (10)	Quiz 1 (10)	Quiz 2 (10)	Quiz 3 (10)	Task Assignments (10)	Reading Quiz (15)	Writing Quiz (15)	Total (80)	Final Exam(20)	Grand total (100)	Grade
1	9.0	8.0	9.0	8.0	10.0	13.0	13.0	70.0	10.0	80.0	B
2	9.0	8.0	8.0	7.0	9.0	10.0	12.0	63.0	13.0	76.0	C+
3	10.0	7.0	7.0	8.0	8.0	12.0	12.0	64.0	11.0	75.0	C+
4	10.0	8.0	8.0	8.0	10.0	12.0	13.0	69.0	12.0	81.0	B
5	10.0	7.0	8.0	8.0	9.0	10.0	12.0	64.0	13.0	77.0	C+
6	9.0	7.0	7.0	8.0	8.0	10.0	11.0	60.0	8.0	68.0	D+
7	9.0	8.0	8.0	8.0	9.0	12.0	12.0	66.0	14.0	80.0	B
8	8.0	8.0	8.0	7.0	8.0	9.0	11.0	59.0	7.0	66.0	D+
9	10.0	9.0	9.0	8.0	9.0	11.0	12.0	68.0	11.0	79.0	C+
10	9.0	8.0	8.0	9.0	8.0	10.0	12.0	64.0	12.0	76.0	C+
11	10.0	9.0	9.0	9.0	9.0	11.0	12.0	69.0	10.0	79.0	C+
12	10.0	8.0	9.0	9.0	8.0	9.0	13.0	66.0	9.0	75.0	C+
13	8.0	8.0	8.0	7.0	8.0	10.0	11.0	60.0	9.0	69.0	D+
14	10.0	9.0	8.0	9.0	9.0	12.0	13.0	70.0	15.0	85.0	B+
15	10.0	9.0	9.0	8.0	9.0	11.0	12.0	68.0	15.0	83.0	B
16	8.0	8.0	8.0	8.0	8.0	10.0	11.0	61.0	10.0	71.0	C
17	9.0	8.0	7.0	8.0	8.0	11.0	12.0	63.0	11.0	74.0	C
18	10.0	9.0	9.0	8.0	8.0	10.0	13.0	67.0	7.0	74.0	C
19	10.0	9.0	8.0	9.0	8.0	10.0	12.0	66.0	15.0	81.0	B
20	10.0	8.0	8.0	9.0	9.0	12.0	13.0	69.0	11.0	80.0	B
21	9.0	9.0	9.0	8.0	9.0	11.0	13.0	68.0	14.0	82.0	B
22	9.0	8.0	8.0	9.0	9.0	10.0	12.0	65.0	11.0	76.0	C+
23	9.0	8.0	8.0	8.0	9.0	11.0	13.0	66.0	13.0	79.0	C+
24	8.0	7.0	8.0	8.0	8.0	9.0	12.0	60.0	11.0	71.0	C
25	9.0	8.0	8.0	9.0	8.0	10.0	12.0	64.0	6.0	70.0	C
26	10.0	8.0	8.0	8.0	9.0	10.0	13.0	66.0	10.0	76.0	C+
27	10.0	9.0	9.0	8.0	9.0	11.0	12.0	68.0	10.0	78.0	C+
28	10.0	9.0	8.0	9.0	8.0	11.0	12.0	67.0	12.0	79.0	C+
29	9.0	8.0	8.0	9.0	8.0	10.0	12.0	64.0	12.0	76.0	C+
30	10.0	8.0	8.0	8.0	9.0	10.0	13.0	66.0	12.0	78.0	C+

31	9.0	7.0	8.0	9.0	8.0	11.0	12.0	64.0	11.0	75.0	C+
32	9.0	8.0	8.0	9.0	9.0	10.0	12.0	65.0	13.0	78.0	C+
33	9.0	8.0	8.0	9.0	8.0	11.0	13.0	66.0	9.0	75.0	C+
34	10.0	8.0	7.0	8.0	9.0	10.0	12.0	64.0	14.0	78.0	C+
35	8.0	8.0	8.0	8.0	8.0	9.0	11.0	60.0	10.0	70.0	C
36	9.0	8.0	7.0	8.0	9.0	9.0	11.0	61.0	10.0	71.0	C
37	8.0	8.0	8.0	7.0	8.0	9.0	12.0	60.0	6.0	66.0	D+

Grading Criteria

Evaluation		Grading Criteria	
Quiz 1-3	30%	A	90-100
Writing Assignments	15 %	B+	85-89
Reading Assignments	15%	B	80-84
Task Assignments	10%	C+	75-79
Classroom Activities	10%	C	70-74
Final Examination	20%	D+	60-69
Total	100%	D	50-59
		E/F	0-49

BIOGRAPHY

Burajt Phoodokmai was born on March 4, 1970 at Yangtalad District, Kalasin Province. He obtained his Bachelor's degree majoring in English and minoring in Linguistics from the Faculty of Education, Srinakharinwirot University, Mahasarakham. After graduation, he worked in a few of trading business companies for almost 8 years. He also obtained his Master's degree in Business Administration (MBA.) in Marketing from the Faculty of Management Science, Udon Thani Rajabhat University. He has been working in the Language Center, Udon Thani Rajabhat University as a lecturer. He also continued his Master's degree in Teaching English as a Foreign Language (International Program), Faculty of Education, Chulalongkorn University.