A MODEL FOR CONTENT AND LANGUAGE INTEGRATED LEARNING FOR ENGLISH PROGRAMS IN SAINT PAUL DE CHARTRES SCHOOLS IN THAILAND

Robert McBain

A Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY
in Educational Leadership
Graduate School of Human Sciences
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By: ROBERT MCBAIN

Field of Study: DOCTOR OF PHILOSOPHY EDUCATIONAL LEADERSHIP

Dissertation Advisor: DR. NATHARA MHUNPIEW

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ABSTRACT

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Teaching and learning practices were examined across three English programs in St Paul De Chartres Schools in Thailand to develop an effective CLIL framework, for teaching and learning math, science and social studies. Quantitative and qualitative data collection methods were employed including content analysis of documents and websites. Findings from this revealed that for any CLIL plan to be successful, eight key administrative and teaching practices have to be planned for and in advance of teaching these content subjects. These eight constructs relate to the best methods for teaching content where English is a foreign language and lead to more successful teaching of these subjects. It begins by integrating the language and content curriculum, where content and language teachers communicate, cooperate and prioritize their content and language items so that students receive planned language content support lessons prior to and during content subjects through differentiation, critical thinking skills, questioning and by the use of appropriate materials.

Questionnaires for teachers and students and interview data from teachers and program leaders were also employed and the results revealed mostly low scores for these constructs. The findings provide a suitable framework to bridge the gap between these constructs and their results. Further to this, the study suggests a model could contribute to increased academic support for student's content development of subjects where language teachers preload students with appropriate academic background language knowledge and study skills that they can build on as an aid, prior to and during the periods of content study.

Field of Study: Doctor of Philosophy in Educational Leadership

Graduate School of Human Sciences **Student's signature……**

Academic Year 2017 **Advisor's signature……**

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CHAPTER I

INTRODUCTION

For the past few decades, a great deal of attention has been paid to how content and English has been taught. As a result a number of theories have developed and become increasingly important in the world of English language instruction namely content language integrated learning (CLIL) that relates directly to the actual teaching and the integration of language and content subjects in the same class.

Consequently, when considering the ways in which this is taught, teachers instructional practices often fall into two main groups the *content* or *language* paradigms and each teacher is more likely to focus on only their own paradigm with little regard to the other. So the reality of teaching content subjects to English language students is that they learn exactly what they are taught. If teachers use techniques that link key parts of the English language together with the academic facts of their content subjects, that's what students will learn. But if students are taught these subjects in isolation of each other and are treated as separate entities, they will learn that too. To suppose anything else would be incompatible (Humphreys, 1981).

Content subjects are important for a multitude of reasons math, science and physics are important because they also help to advance developments in the world in many fields of study, like health, disease medicine and manufacturing to increase the quality of life for everyone. However, at present, there appears to be no models for CLIL aimed at English language programs in high schools in a Thai context.

But how is all this to be achieved? There have been wide ranging issues of learning and the teaching of content subjects in English language teaching for a long time and many educators and other professionals cannot really agree on the best methods for content teaching (Tissington and Lacour, 1996). This is supported by the fact that a major feature of many linguistic articles are related to one core interest; that of the elusive search for new and innovative ways which enhance instructional pedagogy of content teaching in English which maximizes teachers time more efficiently. Efficiently that is, in the better understanding and completion of tasks related to the learning of content subjects using the English language (Qi, 2009).

Considering all this, the most prominent factor that directly influences what they do, and how they do it are the instructional techniques. This gives rise to the idea that suitable educational tools should be devised and developed in order to improve the overall instruction for content classes. So that teaching is more efficient and learning more meaningful with challenges that students are able to accomplish within their own developmental levels. The results could create new opportunities for teaching to improve, which in turn, may also improve students test scores too.

What is needed, and the aim of this research is to propose a model for content teaching that is aimed at high school students. And for students to start to benefit from the vast research to make it work for them and so that teachers can create opportunities for three major areas of learning firstly to expand student's knowledge base to increase their academic experiences and to start to think critically about the content of their studies by enhancing the content materials that they already have.

Statement of the Problem

The teaching of content subjects should be a process where teachers prepare and carefully guide students towards the often, complex use of dense, native language texts which often characterize content subjects. The teaching process should be optimized for the best use of time-efficiency and ease of learning for both teachers and students. Content instruction is at its best, when planned in advance through meetings between content and language teachers, to design instruction and to develop language and content together (Marsh, 1994).

However, students' face many obstacles in content studies, especially when communicating, example reading dense texts with unfamiliar vocabulary and grammar. Math is not only arithmetic, because at times language is needed to communicate problems, science students may lack communication skills when drawing conclusions and also having to communicate a calculated guess. Social studies students may not have the background knowledge of current events and this leads to memorization of facts with no real relevance to their life and is quickly forgotten (Haynes, 2009).

Related to this is a lack of engagement that is also often associated with classroom management problems. Students who are not adequately prepared cannot be expected to engage in study. This also increases the likelihood that students will "switch off" from learning and "give in" to the competing stimuli from the wider classroom environment. These students are often the "canary in the coal mine" those ones who are the first to react negatively to any kind of misunderstanding.

And when vocabulary is taught there is often a casual, narrow reference to a single dictionary generalization that is used only for one single lesson, with no regard to its impact on the student's wider academic environment. And using dictionary meanings is one of the least effective ways of developing student's vocabulary It also increases the risk of extemporaneous teaching moments when the teacher suddenly discovers that a student doesn't know a key word or statement at a later date and has to teach it there and then which is highly uneconomical (Marzano, 2004).

The same goes for contextualized grammar; current methods often completely ignore grammar in content study. Reading skills are also often sidelined, as a narrow reading for specific information activity, with no regard to the advantages of other reading activities. Writing exercises also focus on a single activity that of copying pre-determined information from the whiteboard with no integrating any reading or writing as a study aid. And there is virtually no evidence of any critical thinking nor differentiated instruction, which is related to any aspect of content study.

This complex interaction of study skills is important. Because students need to know what and why they are reading. It encompasses all the other deeper psychological theories that utilizes background knowledge. But it also relates to good teaching practice and to demonstrate good overall academic skills and habits for all these subjects that are highly correlated to student's success in the classroom & beyond (Sedita, 2005).

What is further exacerbating is the fact that there are no accepted formal teaching methods for content and language learning. This is due to the fact that content teaching is still a relatively new concept in the world of English language learning. And although research does exist it is often piecemeal and concentrated in small areas (Iakovos, 2010).

Because of this lack of formal teaching methods, many content teachers instructional style is often observed as unstructured, lacking detail and planning is often chaotic and undisciplined in their delivery of lessons like "teaching in the dark" with too much emphasis on content and not enough of pre-teaching. Content teaching often relies on methods that are usually teacher centered which are dominated by the teacher's lecturing style and although direct instruction does offer a valuable role in content teaching. It should be used as part of a well-balanced and planned system (Nation 2005, Billmeyer and Barton 2002).

Given these facts it is important that teachers should consider that language features should also be included in content lessons. For example teaching essential vocabulary, grammar, reading and writing, as well as having a basic, understanding of critical thinking, goes a long way to becoming part of a more balanced approach to instructional planning and which also forms part of a series of lesson plans to deal with the language barriers which are so often present (Omoto and Nyongesta, 2013).

Schools need a more practical, bottom up approach, to content instruction, to enhance it and which also fosters a more "learn by doing". This new approach should include tools to enhance essential study skills and habits, install a more disciplined approach to integrate key vocabulary along with contextualized grammar, read fluently and to have a basic understanding of critical thinking skills which should be designed to prepare them to think more deeply and to analyze the contents of their subjects which involve facts, generalizations, beliefs and opinions.

Because, unless a more efficient model is devised for teaching content subjects the status of content teaching will never improve and will remain problematic and chaotic and may even get worse. However, by activating the research and adapting well known theories and re-thinking strategies about approaches to content instruction, learning may be enhanced. So therefore, the aim of this study was to identify what techniques were used in content study and to propose a model to enhance the learning of it, so the research questions are thus.

Research Questions

The aim of this study was to identify what methods are used in content study and to propose a model to enhance the learning of it, so the research questions are thus:

1. What are the instructional methods used for content subjects in English?
2. What are the instructional methods used in content subjects?
3. What learning methods do students use for content subjects?
4. What is an instructional model for content subjects?

Research Objectives

1. To develop a model for content and language integrated learning.

1.1 To explore the instructional methods used in content subjects in English.

1.2 To identify the instructional methods used in content subjects in English.

1.3 To identify how students learn content subjects in English.

Theoretical Framework

The design of the model for this study was based on previously learned theories that were developed to improve students learning namely:

• Differentiated Instruction (Tomlinson, 2008)

• Content Language Integrated Learning (Marsh, 1994)

• Transformational leadership (Burns, 1978)

Differentiated Instruction

Differentiating is important for this study because it encompasses all the strategies used when teaching content and language subjects together. It also means supporting all of the other objectives. It's principles lay in creating multiple ways so that students of different abilities, interest or learning needs can experience equally appropriate ways to help them study use, develop and present their learning of concepts as a part of the daily learning process. It allows students to take a greater responsibility and ownership for their own learning, and provides opportunities for peer teaching in groups to have the maximum effects on a diverse group of students and also encourages cooperative learning among them (Tomlinson, 2008).

For Tomlinson differentiation simply means that teachers should have clear learning objectives that are rich in meaning and provide all of the important various ways in which they can support students in their own ways of attaining those objectives. She suggests a number of ways in which teachers should implement differentiation. Firstly is to use pre-tests that are important prior to instruction to assess what students' need and to begin to understand their interests. Secondly teacher led small group cooperative learning is an ideal way to reach those students who often get lost in the mass of the larger classroom layout, it also makes in easier to re-teach content to smaller groups.

Content Language Integrated Learning

The term CLIL was first devised by David Marsh, at the University of Jyväskylä, Finland in 1994. It refers specifically to teaching subjects, for example math, science and social studies, using a foreign language to teach it. It has a dual purpose. First and foremost it is to teach the main points of the subject (content), but at the same time, using a target language. CLIL is often implemented in different ways depending on the ages of the learners and which also may involve periods of learning some items of language or language encounters prior to actual content learning, that helps to build student confidence (Marsh, 1994, 2002).

Furthermore: Marsh (2010) stated that CLIL is a kind of language learning, but it is not, in reality, a technique for actually teaching the language. The main purpose of a CLIL class is the teaching of content and not the language per se. Marsh continued to state that although language teaching plays a big part in the teaching of content, it has to be done in conjunction with authentic content teaching and learning.

However this involves a certain learning curve by all the teachers involved within the program. This is because CLIL is most often viewed in many schools not only in Thailand as subject specific and is taught that way, as opposed to the language being taught. The ideal situation, is to first, recognise any language within the body of the text and pre-teach that prior to the content, and for school programs to allow students to have equal access to both language and content and where they can give their attention simultaneously, to both topic and language (Marsh, Jesús, and Martín, 2010).

Coyle takes a similar approach, for her CLIL is a term used to describe any activity in which a foreign language is used as a tool in the learning of a content subject such as math or science where language and subject have a joint role. Content means integrating content from across the curriculum. Cognition means engaging learners through higher order thinking and knowledge processing. Communication means using language to learn and mediate ideas. Culture means interpreting and understanding the significance of content and language and their contribution to identity and citizenship (Coyle, 2001).

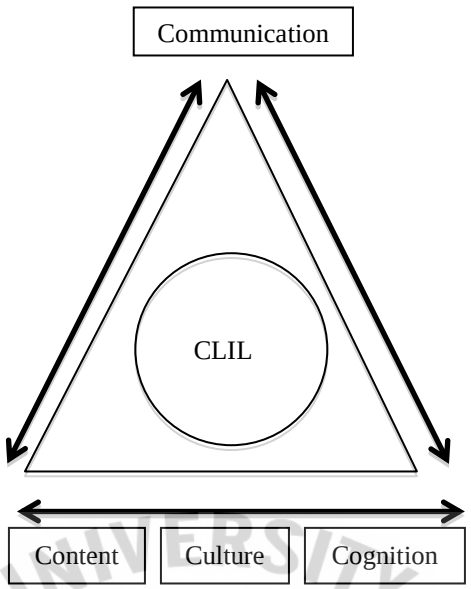


Figure 1.1 The 4 C's model for CLIL (Coyle, 2014).

Figure 1.1 demonstrates the three main points of CLIL. Communication means using language with ideas. Content means integrating the curriculum between content & language. Culture relates to understanding how important it all it to their own lives. Cognition means using thinking skills during the whole process of the previous points.

Transformational Leadership

The model also relates to the theory of transformational leadership because this theory recognizes that change in organizations is often necessary and when change comes about, it is the result of a moral undertaking by those leaders who have a vision and a goal in which they set themselves and their staff and is often a response to their wants and needs. For this study it relates to teachers having to re-think teaching strategies to pre-teach essential academic skills prior to content study (Burns, 1978).

This also has a relationship with instructional leadership that focuses on methods and processes to improve, school systems, which also includes teaching too so that students can improve. To make this happen transformational leadership theory specifies a restructuring of a system in order for a particular mission and the vision of a leader to be redefined and also that key responsibilities be refreshed so that the particular leadership goals can be reached. Therefore transformational leadership is often adopted by leaders, to who aim to ensure that their staff identifies themselves with these goals of the organization in order to improve (Hoy and Hoy, 2003).

What is important here is the relationship to overall school leadership. It is closely related to the development of a school English program curriculum but also its leadership, teacher development and the instruction they use in the class, all with a common purpose to improve student achievements. These should come from a school leader who has a strong sense of moral purpose for the development of their staff and the students they are responsible for (Glickman, Gordon, & Ross-Gordon, 2013).

Conceptual Framework

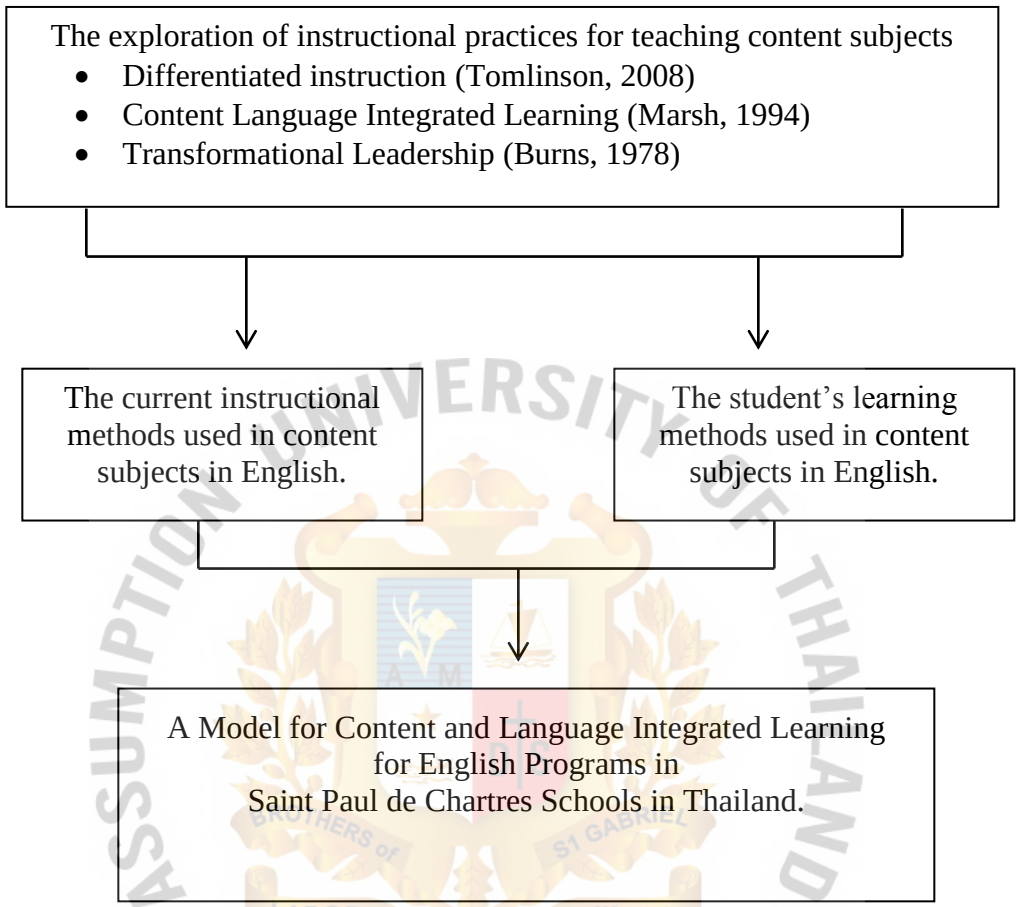


Figure 1.2 Conceptual framework.

Figure 1.2 shows how major theories were instrumental in guiding the planning and research for this study that explored instructional and learning practices for teaching content subjects. Following on from this, further research was conducted to find out what methods teachers used during content study and then to find out what learning methods students used in the three English programs. From this, a model was developed that is aimed at guiding content teachers to plan and deliver content studies more effectively within the three English programs.

Scope of the Study

The scope and what it means for the researcher is to synthesize the importance of key theories from a content analysis study of 354 items of which there were 103 articles, 215 books, and 36 websites from 2000 to 2015 related to the theory and instruction of math, science and social studies in English. The study focused on the development of a model for content and language integrated learning for English programs in Saint Paul de Chartres schools in Thailand during the semesters of 2016. The population of which consisted of 1,523 students with a sample of 306 and 140 teachers with a sample of 128.

Definitions of Terms

Blooms Taxonomy This refers to the process and teaching of how students think at various levels, beyond simple recall of facts. It is a hierarchical system built on how different types of questions require students to use various levels of thinking and to develop their knowledge related to the teaching process.

Content Subjects This refers to teaching specific subjects in formal education at school. Content subjects are specifically science based subjects, math, and social studies among others, taught to non-native speakers of English.

Content Language Integrated Learning This refers to the teaching of a specific subject such as math, science or social studies to students using a foreign language.

Differentiated Instruction Differentiation is a way of teaching, not a program or a package of things done in class. Its strength is to know individual learning styles, so that each student improves. To achieve this, differentiated instruction is also

characterised by on-going informal assessments by teachers to discover the strengths and weaknesses of students and their needs in the classroom.

Model Theory For this study, model theory relates to the best practices aimed at improving instruction. Specifically those related to the pre-planning and delivery of key theories, especially language, that are carried out prior to the instruction of math, science and social studies in English.

English Programs These are specific teaching programs where the teaching of content subjects is taught in the English language to Thai students. They receive more content lessons that are taught in English. It is based on the Ministry of Education's curricula, to enable students to attain higher standards in English and content subject across the curriculum.

Instructional Methods The use of methods for this study is a wide interpretation of any instructional practice, or teaching methodology, strategy, activity, exercise, model or any form of instruction that promotes good practices that supports teacher's efforts' in strengthening student's ability in a content-based lesson.

Student Learning This is again a wide interpretation of any strategy that students use when studying in a content class.

Saint Paul de Chartres Schools This organization is an all girl Thai-Catholic religious congregational school organized for the teaching and education of junior and high school female students. It has twenty-two schools around Thailand and are all administered by the Saint Paul de Chartres nuns. The schools offer formal education from Prathom one to Mathayom 6.

Transformational Leadership This leadership theory specifies the importance of restructuring a system in order for a particular plan to come into effect. It starts as a

vision, from a leader and is defined by the changes that are made to a system already in place, so that particular goals can be reached. Leaders, who aim to improve an organization, often adopt this theory. For this study it means using leadership skills to guide teachers to update their current thinking to one in which prepare students more for their content studies by adopting new practices like pre-teaching and building their background-knowledge skills making them more ready for content studies.

Significance of the Study

This section describes the significances of the study. The model might be seen as a guide for English program leaders and administrators who may already have or may be considering starting an English program and how it relates to the leadership of the teachers in it, by guiding them to integrate more language that is related to the teaching of math, science and social studies. It may also serve as a guideline for content teachers to help them towards implementing best practices during the instruction of these content studies, by pre-loading students with essential language prior to studying them. It may also benefit students to have greater access to their content studies, through a better understanding of the language they use in them, because they would be better prepared for those subjects. It may also benefit future research into the subject of content teaching, extending research into the components for academic language related to content instruction. For critical thinking it is especially significant for the ASEAN community, because there will eventually be a reduction in the legal entry status for students from other ASEAN nations and where the competition for jobs will be tougher and therefore a stronger need for academic skills related to both content and language.

CHAPTER II

REVIEW OF RELATED LITERATURE

This research is guided by related theories & literature that discusses the theoretical basis which applies to the concept of instructional leadership and the efficacy, directions and goals for those teachers who wish to follow it. The model and the research that went into it should be seen as an example of instructional leadership that leads the way in developing new ideas from research and as a powerful tool for teaching content subjects. It also demonstrates classroom leadership but also creativity in design, substantiality in its impact and initiative in its structure.

In chapter 1, the stated research objectives and questions were an analysis of the evaluation of the desired characteristics that were based on a perceived & shared vision. These problems have been the result of a long period of teaching culture where teachers used limited knowledge in content teaching that has not been developed fully. This chapter is also related to developing classroom teaching and should be the result of established theories and is concerned with establishing clear directions, goals and a sense of instructional vision to drive teachers to see the bigger picture and use research to its fullest, the chapter is divided in to 3 parts namely:

Part I: An overview of Saint Paul de Chartres Schools

Part II: Related Theories

Part III: Related Research

Differentiated Instruction

Content Language Integrated Learning

Educational Leadership in Schools

Part I: An Overview of Saint Paul De Chartres Schools

The St. Paul de Chartres Congregation was founded over 300 years ago in Levesville la Chenard, France and the first schools were built in 1905 those were Assumption Convent (Bangkok), St. Joseph Convent (Silom), and St. Francis Xavier Convent (Samsen). Today there are 22 schools throughout Thailand administered by the St. Paul de Chartres Congregation with a population of some 3,000 teachers and 60,000 students.

They are administered in a Thai-Catholic system that concentrates on blending the morals and ethical behavior of Buddhist and Catholic traditions with ceremonies like Wai-Krhu day and the Catholic traditions like Holy Communion at the start of important events in the school calendar. This is so that students grow up and be responsible adults and to respect a multi religious community. It also teaches them about the ethical and moral issues that relate to being a good citizen. This integrated approach also relates to the parent and teacher association who organize events throughout the year (Punnachet & Atchara, 2007).

The philosophy of Catholic education emphasizes the importance of key values, especially those related to human dignity, human rights, and social responsibility. But teaching and learning in the Thai-Catholic system has a long history but despite this, as with every school, Saint Paul de Chartres it does have its fair share of instructional challenges.

It seems that teaching and learning in the Thai-Catholic system has a long history. The difficulties are faced mostly within the English Program in particular the teaching of content subjects in English to students whose first language is not English. These challenges are enhanced when we consider that for as long as English programs have been in existence in Thailand no formal teaching-model exists for the teaching of content subjects in English programs. Further challenges exist with the communications and cooperation between teachers and administrators and between teachers themselves but also their planning, and the delivery of the English content-based curriculum in which the content lessons are based, especially with the preparation of students for content study.

Part II: Related Theories

Differentiated instruction.

Differentiated instruction, for this study, means adopting pre-teaching major pre-requisites that are vital for students to be prepared for their content studies. But it also apples to all the other strategies, that utilize best practices in the content classroom. Dahlman, Hoffman and Brauhn (2012) quote Tomlinson in the report of a major important theory that has proven to be highly successful especially in content classes that of differentiated instruction. It has been a relatively widely used instructional strategy across many curriculums in the general education context where teachers reported consistently better results from other methods (Dahlman et al., Hoffman and Brauhn, 2012).

Tomlinson (2001a) states that differentiated instruction as a philosophy of teaching, is based on the principles that students learn best when their teachers accommodate teaching to suit the differences in their various levels, interests and learning profiles. A chief objective of and one that teachers should firstly understand is to take advantage of every student's ability to learn and direct activities and lessons to suit them. This can be performed in many ways and can be effective as it responds to the personal needs of diverse students (Tomlinson, 2001).

For Tomlinson differentiation means adopting practices that promote being more student-aware, and guided by the idea that content teachers should learn to maximize their students potential by taking the effort to get to know their students language and knowledge limitations. But it is also to allow students to be responsible for their own learning too. And where students learn to take more control of their own learning.

Trust is when students' realize that teachers' understand them as individual people and support them as such. Fit generally means fitting the instruction and work that the students' can do. If it is too difficult, students' will switch off from learning, if it is too easy they tend not to be challenged. In both cases students' are not challenged adequately and their learning capacity diminishes. Student's voices mean that teachers should respect students' opinions, and seize opportunities or create them and use the students' opinions and act on them. Awareness is the ability of a teacher to create situations that allow students' to know what they can do & place emphasis on more skills development (Tomlinson, 2008).

The purposes of differentiation. In todays classrooms there is a growing trend and one in which many teachers are faced with is that of reaching the needs of all levels of students, regardless of their academic levels, and being able to recognize this and to help them to academically move up a scale. Many ESL classrooms contain a heterogeneous mix of students from a variety of backgrounds, from different areas and from the different programs even from different ages too. For these reasons, teachers must be prepared to work with such diversity to meet curriculum demands and to accelerate students to their highest potential instruction, through academic opportunities to grow with the confidence to learn by themselves (NC Department of Public Instruction, 2006).

For Tomlinson there are six key principles of a differentiated classroom. The teacher is clear about what matters in subject matter. The teacher understands, appreciates, and builds upon student differences. Assessment and instruction are inseparable. The teacher adjusts content, process, and product in response to student readiness, interests, and learning profile. All students participate in respectful work. Goals of a differentiated classroom are maximum growth and individual success. Finally flexibility is the hallmark of a differentiated classroom (Tomlinson, 1999).

Diamond stated that three main areas of content studies can be differentiated those are content, process and production. Content is described as the knowledge, skills and attitudes we want students to learn. It's true that no two students are alike, and no two students learn in the same way.

An academic, environment for one student may not necessarily be the best one for other students even if they are in the same class. For Tomlinson, content can be differentiated, by adopting many activities for example, in reading:

- Reading buddies
- Read and summarize
- Read / question / answer
- Using reading partners
- Parallel reading with teacher prompt
- Choral reading (Tomlinson, 1995).

Differentiating the processes means varying learning activities to provide appropriate methods to suit the varying students learning styles. Some may prefer to draw answers others to design a graphic organizer, to display their comprehension of a concept. These variations can effectively facilitate differing levels related to cognitive processing for students of differing ability.

Differentiating the product is varying the complexity of the product. Students working below grade level may have reduced performance expectations, while students above them may require advanced work. It is motivating for students to be offered choices of product designed in varying levels. The classroom environment and individual learning styles is perhaps best described through an understanding of the work of Howard Gardner and his Multiple Intelligences theories. And these are often a basis for dealing with differentiation in any class (Diamond, 2011).

English Programs in Thailand

As a result of the new National Education Act from 2004-2007 schools can offer Math, Science and other content subjects in English and at the secondary level, all subjects except Thai can be taught in English. To do this, English programs must be set up to offer such programs and the curriculums must also be devised too. At present, there are 75 government schools which offer English programs throughout Thailand and 121 bilingual schools, offering English education from kindergarten to secondary school level (Thai Ministry of Education, 2014 and Darasawang, 2007). The school has to operate an English program under a special license from the Ministry of Education, and there is a process and protocol by which each school must abide by. When granted, each school can raise its own fees and all subjects including all the sciences, Social Studies, Art, Home Economics, Physical Education, and Health studies are all taught by native language teachers (Thai Ministry of Education, 2014).

The English Program system in Thailand is a relatively new phenomenon in Thai education. It was brought about as a result of changes to the new National Education Act in 2004 in an initiative by the Ministry of Education (M.O.E.) to enhance the teaching and learning of the English language to mainstream schools. English programs at the Prathom level are required to provide teaching facilities in English for Math, Science and Physical Education all using the English language by qualified native speakers. However at the secondary level, all subjects except the Thai language may be incorporated into the schools English program. An alternative to a full English program is the mini English program where only 50% of the classes

can be allocated for courses taught in English. English programs are becoming popular in Thailand especially for students who want to enter prestigious universities in Thailand and abroad. However setting up and maintaining English programs are considered by many schools to be expensive to set up and maintain (Darasawang, 2007, & M.O.E, 2008).

Each English program operates using a Thai curriculum for the Thai subjects and key learning, standards and indicators for teaching English and other languages. For English programs, there are eight main teaching and learning areas and they differ as students enter the upper grades of high school. Students at the end of Mathayom 3 must choose either a languages based curriculum or a science-based curriculum.

Table 2.1 The Subjects for all English Programs.

Core subjects	Additions to English programs
Prathom 1 – Mathayom 3	Mathayom 3-6
1. Thai language	
2. Mathematics	
3. Science (fundamental)	chemistry, physics, biology
4. Social studies, Religion & Culture	Social studies
5. Health and Physical Education	
6. Art	
7. Occupations & Technology	
8. Foreign languages English & Chinese	French

(Thai Ministry of Education, 2001).

Theories of Second and Foreign Language Instruction

The instructional methods in the English program for language and content subjects are mostly direct instruction in style. The presentation practice and production method is used extensively for both language and content teaching with additions of teachers using overhead projectors and or whiteboards plus flashcards. A lot of use is made of classroom worksheets either made by teachers or printed from websites. Course books provide the main part of the physical curriculum. Saint Paul de Chartres schools are only now at the beginning stages of utilizing more student-centered learning methods as required by amendments to the school teaching curriculum.

Other instructional methods include:

- Oral discussion.
- Presentations.
- Direct teaching of grammar, and content subjects.
- Writing projects.
- Concept / mind mapping (Saint Paul de Chartres, 2017).

Literacy skills. Literacy skills are the basic skills students need to communicate effectively. This means knowing how to read, view, write, speak and practice active listening too (Neilson, 2014). Providing academic literacy development and support was a key theme for McWilliams and Allan who developed a literacy model from best practices, offered in many other approaches to the subject (Chanock 2007, Durkin and Main 2002). In this model they configured an approach to literacy development that has at its core the following elements thus; that

administration recognizes and supports the development of academic literacies across the disciplines and should receive the same level of support given to all other subjects in the curriculum. Administration should emphasize that collaboration and cooperation between subject teachers and literacy specialists as a priority and consider these relationships to be invaluable for the ongoing success of literacy initiatives. An approach that places guidance over remedial activity clearly suggests that working with students on their writing tends to have a strong developmental focus than on correction after they have completed their work. Administration should also adopt a more student centered approach to learning as research has long highlighted the importance of a student-centered learning approach to both teaching content and embedding academic-literacy skills in the curriculum especially for content subjects (Boud 1981, and Blumberg 2009) (McWilliams and Allan, 2014).

Teaching vocabulary. Nation stated that direct teaching of content vocabulary is not an effective way for students to acquire or develop their knowledge of it, but nonetheless, a part of a well-balanced vocabulary program. The main problem is that students are limited in the amount of words they can learn. Nation's approach stated the continued, emphasis on the importance of repeated use of the target vocabulary in various forms and at different times. He emphasized keeping the teaching simple and clear and not to give complicated explanations. But also, to relate, the present teaching, to past knowledge, by showing a pattern or analogies. Use both oral and written presentations and to write it down and at the same time explaining meaning (Nation, 2013).

Stahl and Fairbanks (1986) describe their model vocabulary model that begins with students having a basic knowledge about a word, which they call association. From further repeated use of the word in class by using it in context they develop more comprehension of the word. Then later and at a higher level of word learning, called the generative level, they apply what they know about words, to new and original situations, especially using it in their writing by adding prefixes or suffixes to make new forms of the words (Stahl and Fairbanks, 1986).

Teaching grammar. Savage et al. concluded that the advantages and limitations of a variety of language-teaching methods and instruction was the most sensible approach to take. This eclectic approach should contain a wide variety of the best and most effective methodologies and approaches like borrowing the best parts of various models and approaches that a teacher considers that fits with a particular class or grade & ability. This eclectic, approach would include emphasis on form with contextualized communicative practice of the grammar and parts of speech. Additionally, such an approach would have at its base, further emphasis on students practicing grammar in a more natural sequence by first listening to the sounds then speaking, then reading, and finally writing. This would continue by teachers devising content related materials like diagrams, actions, pictures, slide shows, or objects to present the target grammar. Contexts for instruction that comes from interactive and real events related to the lives of students and which integrates form, meaning, and use and also lessons that include pronunciation practice is also highly essential (Savage, Bitterlin, and Price, 2010).

Teaching reading. Much of the research on good readers' and how they comprehend text comes from the work of Duke & Pearson, 2002. In their model entitled "Effective Practices for Developing Reading Comprehension", they give credit for the work of Pressley and Afflerbach 1995. The main points of their model are that good readers,' are active readers. They try and understand the meaning of vocabulary from the context. They read with intent and have a clear goal for learning and evaluate this as they read. Good readers also typically perform some kind of pre-reading strategy to know what they are about to read and how it fits in with these goals. This pre-reading strategy also allows them to make predictions about the text too. As they read, they decide and select parts and are continually assessing what to read carefully, what to read quickly, what not to read, and what to re-read. Good readers also revise, and question as they read (Duke and Pearson, 2002).

A similar approach to reading is provided by Biddulph and which is entitled "The Guided Reading Approach". It is best used together with small groups and other more common approaches like paired or independent reading. This approach begins when a teacher carefully selects a text that is grade and also level appropriate. Then completes some pre-reading strategies when introducing the text and also at the same time tries to relate the text to a real life situation more especially to the lives of the students, then provides continued sensitive scaffolding support for the students as they "talk, read, and think their way purposefully through" the text (Biddulph, 2002).

Metacognition in reading. Metacognition is a conscious and deliberate mental activity and can be taught and used often in reading. Teachers should model it and promote its importance as a natural response to anything they don't understand (Martinez, 2006). Metacognition can also be measured by using simple paradigms as researchers have used to examine student's abilities to evaluate their own sense of reading comprehension. In the error detection paradigm students are provided with a piece of text with some misspelt words and notice how students react to the wrong spelling, if students don't react to the mistakes they conclude that students may not be adequately evaluating themselves while reading (Zabrucky and Agler, 2008).

Teaching writing. Alber, (2017) describes the idea of the struggle for many EFL students when; trying to write well in the classroom as a really big challenge for many of them and to do it well, means having in their possession a plethora of other skills to enable them to achieve some gains. She relays heavily on the theories that places emphasis on a number of high quality approaches to writing that are vital if students are to achieve any gains in it and that actually work in the language classroom. The first being that of a teacher providing a modeling approach for students so that they can see what a perfect piece of writing should look like and not only one piece either it is expected that teachers should provide several written models in different styles so that students know what they are expected to produce, this should form the cornerstone of scaffolding in the subject. Modeling can be made even more successful if a rubric is used as a guide for students to follow as they progress.

Secondly teachers should work with the advantage of knowing student's prior knowledge of the subject that they are writing in. By asking students to relate what they write about to their own lives also helps them to use their own experiences to their own advantage. Students also need time to process any new ideas and information, this is best completed in groups or in pairs and it allows students to share their ideas. A third and equally important approach to writing and a common sense one at that; is to pre-teach vocabulary (front-loading) so that students get the opportunity to practice using it in a piece of writing (writing in context) is a hugely important part of writing and the teaching of it. Teachers cannot expect students to use new words to develop their vocabulary or practice their use of them or develop their study or writing skills if they don't use any vocabulary that has been pre-taught.

This pre-teaching is best, done using visuals, as well as other kinds of scaffolding including short writing tasks, analogues, and metaphors. Using visual aids when teaching vocabulary and writing skills, should be done from the perspective of showing how its done by using graphic organizers, which should include pictures, charts, hard and soft scaffolding, sequencing, and also cause and effect. These graphic organizers shouldn't be considered as the end product, they are scaffolding tools that are an aid to achieving a specific aim again students need time to process these newfound words (Alber, 2017).

These effective literacy strategies that build on students background knowledge are also high on the agenda for the work carried out by Saunders and Goldenberg (1999). They state that it's important to build on students' existing

knowledge, skills, and experiences. They go further by stating that it is hugely important that students are allowed to make these explicit connections from their own experiences because this background knowledge can help contextualize the very themes they are studying. Not only that but by drawing upon, and sharing the discussions between students' personal experiences using personal connections sustains motivation and help students make concrete and conceptual connections to the studies they progress (Saunders and Goldenberg, 1999).

Good writing skills are also an aid to arrest one of the more serious and long-term phenomenon within EFL that often occurs in writing and speaking too and that is fossilization. Fossilization either temporary or permanent comes in many different forms, syntactic, phonological & others. Pesce stated that the most common fossilized errors are using the wrong tenses, incorrect or not using articles syntax, incorrect plural nouns, confusing the infinitive, gerund or base form of the verb, coordinating conjunctions, subject verb agreement, incorrect comparatives (Pesce, 2017). Fossilization can happen as a result of a wide number of reasons namely poor initial teaching groups that already share the same fossilized error and natural transfer takes place within the group, and poor correction if at all. It can also appear at any level of language development too and if not corrected ingrains itself in the personal language use of the student and has to be re-corrected by some teacher at a later date, if ever. It has a serious impact on communication especially in writing because of its' more permanent nature and because of this it deserves more attention. Simply put; get the production of word forms when writing correctly and the arrest of the fossilization begins, to become affective (Xueping, 2008).

Teaching math. It is important to math teachers to understand, that 'content' comes first and this leads all subsequent language, related to math (University of Cambridge, 2006). Learning math often involves complex thinking skills, one of which is making a hypothesis and then to prove if it is true or false. But to use thinking skills they need to integrate math & language together using effective instructional methods. Math teachers should use a multitude of strategies appropriate for a specific concept in both math and language. For example teachers must ensure that the use of "real-world" contexts maintains a focus on mathematical ideas (The Education Alliance, 2006).

To further achieve this math teachers need to understand the value of group or paired work because students are often shy about giving answers by themselves. So group work alleviates this problem. Student groups can also devise short presentations and individual students can contribute their own small part. Employing tasks that are challenging to students who usually need more constructive support especially in a foreign language is also effective. So teachers need to be able to provide hard or soft scaffolding in both content and language support. Good examples are cloze exercises on the board and groups can work together to present their case (University of Cambridge, 2006.). Questions and practical tasks are also highly effective methods that develop students thinking skills. But they should also be planned across the range from easy, challenging too, in both math and language. However, the more complex the questions are; may also require some pre-teaching of new vocabulary and grammar so that students get a chance to build on their language skills and at the same time use math as a basis for it (Reuben, and Sogillo, 2016).

Teachers also need to utilize “wait time” when teaching non-native speakers. This wait time refers to the longer than usual waiting time that EFL teachers need to employ to allow students to construct answers. Teachers also need to plan the input; that is the information that is being presented to the class that includes content vocabulary, and the grammar used to bind it together. This can be done orally, presented on paper, slides, or even practical demonstrations. Teachers also need to plan for student’s output too. That is, the strategies students use to demonstrate their newfound knowledge using the content and language together. Again these can be oral presentations, writing, or practical skills, again either individually or in groups. Finally teachers need to assess their instruction and also allow students to see their own success too (University of Cambridge, 2006).

Teaching science. When EFL students are learning science in a foreign language they have the added burden of trying to learn it in a language that they have not yet mastered. Furthermore, teachers often miss out on opportunities to pre-teach ideas related to science. Therefore teachers have to employ methods that make the best economical use of time (Carrier, 2011). Further to this if science teachers are to be more effective they also need to know key instructional strategies that will help students learn the array of complex theories in the subject. In other words, they need pedagogical knowledge (Bransford, Brown, and Cocking 2000).

One of the best known of these methods is inquiry-based instruction. Although, not standing in the way of other well known teaching methodologies, inquiry based learning is a collection of activities that emphasizes questioning,

problem solving and creating situations that require students to engage and act, through curiosity and interests. This is highly beneficial to students when studying science and languages together, as it allows teachers, to integrate language problems along with science to allow students creative thinking to be stimulated. All students can develop some context-based knowledge along with language development, as they participate in these collaborative activities and interact with others using hands-on activities that include completing written assignments, oral, as well as more kinesthetic forms of expression. It is also true that intentional and explicit instruction for example on theories that use new vocabulary also plays a part and can benefit both English proficient and EFL student's literacy development as they learn science content (Lee, Buxton, Lewis, and Leroy, 2005).

Effective EFL science teaching also relates to more detail in practical applications by the teachers. Simply put it's about knowing what students need and assessing these needs so that adjustments to instruction can be made as they progress. This focus on the formative assessment processes is highly important especially in science because of the many complex theories and concepts within the subject including language issues too. Donovan & Bransford, (2005) state that this is consistent with how students learn. They emphasized the following principles of learning science namely:

- Teachers assess students for prior knowledge of science concepts.
- Actively involve students in the learning process.
- Help students be more metacognitive so that they can acknowledge the
- Science concepts they understand, the goals for their learning, and the

- Criteria for determining achievement of the learning goals.
- Ensure that learning is interactive and include effective classroom
- Discussions (Donovan and Bransford, 2005).

They strengthen their stance on science instruction by emphasizing deeper strategies particularly the importance of metacognitive strategies. Helping students to do this for themselves is closely tied to teaching practices that emphasize self-assessment, another vital strategy in science education. However this must also come with a certain amount of teacher support for self-assessment, which is an important component of effective teaching. This can include devising experiments to test ideas and hypothesis theories by making things and experimenting, and reporting as they progress and for them to see and view the success for themselves (Donovan and Bransford, 2005).

Teaching social studies. The social studies is a collection of subjects that incorporates geography, economics, history and political science and in some curriculums others too. It is provided in schools as part of an academic program that helps form the basis and development of a range of social awareness as well as civic competence, and also to being well informed members of their society and to help them develop the ability to make informed and reasoned decisions for the public good as members of citizens of their own country (Myers and Adler, 2002). The main academic aims of social studies have included a rich composure of elements that are not too unfamiliar with the teaching and learning of key problem solving skills in other words critical thinking skills. But this does create problems for some societies

and cultures whose students may not have been brought up in a culture that allows them to express their political or personal view especially when they may clash with people who are older in their society (Michelle and Ahmad 2014).

However for those who are serious about implementing a social studies program in their schools then it demands that effective second language instruction methods and instruments be embedded across the curriculum to support that content. This, in turn, requires building an infrastructure and capacity (but also maintaining it too) that supports literacy along with content learning. According to The Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE) providing instruction and the necessary supporting infrastructure that targets both content and English language learning objectives in these programs makes effective social studies teaching accessible to all students (Reutebuch, 2010).

Clara Lee Brown sums up studying social studies in a foreign language succinctly when she states that "reading in social studies is particularly challenging for EFL students, simply because many students often lack the necessary background knowledge that they need to have to be able to comprehend the texts" (Brown, 2007). This is also related to the fact that social studies in particularly the vocabulary can be highly technical and abstract. Also the discourse style of social studies is also a concern for many with rows and rows of dense native language texts that is often not intended for students whose first language is not English. Put all these together and what results is a daunting prospect for students and often a challenge one for many teachers too. And as far as research is concerned it has repeatedly shown that content-

area instruction in education that is conducted in a balanced form holds the most promise for EFL students and more especially when it is delivered in two languages (Lindholm-Leary and Borsato, 2002).

Current trends in teaching social studies. Some of the best instructional methods for teaching social studies comes from a plethora of studies: some including the National Council for the Social Studies it calls for teachers to emphasize activities that;

- Integrates language and content studies.
- Build on what students already know about a subject.
- Use recitation, discussion, and role-playing.
- Writing short answers, longer answers as students can use more.
- Whole class teaching small-group and paired activities.
- Alternative Assessment Techniques (Alleman and Brophy, 1999).

Wilson (2012) stated that teaching literacy skills is limited to how teachers have themselves developed in terms of second language teaching development.

- Showing instead of telling.
- Role-playing.
- Start with what students already know.
- Repeat and practice.
- Tailor questions to students level.

Second Language Teaching Strategies

For the teaching of languages, there seems to be no shortage of techniques and strategies for the EFL classroom. The Washoe County School District alone lists 49, instructional strategies, or approaches, that they have collected and adapted with their working groups for their district (Washoe County Schools 2015). The Alliance for Excellent Education list: six as their most productive strategies for teaching EFL in the classroom. It views teachers as mentors who make concerted efforts to teach language as a planned event using students background knowledge, reflection, and observations of other teachers as vital tools for self-development.

The first is the idea of vocabulary and language development, which teachers use to introduce new concepts through discussion and that also builds on student's background knowledge. Guided interaction is a second method. This is where, teachers' design instruction that focuses student activities to work collaboratively so that they can learn from each other.

A third strategy is teaching of metacognition skills. These are skills that require students to think, while they are studying and not to simply remember facts. It is especially effective when reading and learning new words. For authentic assessments, teachers should use a variety of activities to check students' understanding. Not only that students also need a variety of ways in which to demonstrate their understanding of new language skills. Direct instruction, of well-known concepts, and academic language is also high on their agenda as a valuable instruction tool.

The fifth strategy means to base the subject of the teaching on something that makes a connection with the lives of the students' and at best makes a link to an academic concept this way they are more highly motivated and learn at a better rate.

Graphic organizers, and visuals are the final strategies. This also extends to the variety and use of visual aids, including pictures, diagrams, and charts, these help students at all levels. Especially when they are used as scaffolds to support ideas and concepts. What is more is that using all kinds of visuals allows all levels of students to take part in the learning process (Alliance for Excellent Education, 2005).

Language teaching schools. For any foreigner to be accredited as an English language teacher in Thailand they need to have completed a basic teacher-training course often commonly called the TEFL course. TEFL courses can be completed part-time or full time, and there are a plethora of private companies offering foreigners incentives to train with their company, many of these incentives relate to jobs, education visas, placements, accommodation, sightseeing tours and the necessary certification to work as an English language. As part of their marketing and educational requirements these companies offer much the same curriculum that centers on the theoretical and practical teaching subjects such as:

- How to teach grammar.
- Observations of other teachers.
- Classroom management.
- Lesson planning and reviewing of teaching materials.

These training schools themselves also need to be licensed and authorized by the Ministry of Education (M.O.E.) so that they have the necessary formal accreditation to offer courses to foreigners. From the myriad of websites and advertising available on the Internet and other promotional media, and the various curriculums offered by them, it seems that many of these language schools teach only one teaching technique to foreigners that is specifically used for teaching languages in English and that is the presentation, practice, and production method (TEFL, 2007).

However, it is important to stress at this stage a strong distinction, between the training as an English language teacher and the training as a content teacher. English language teacher training refers to training to be an English language teacher and any techniques used to do so. But content teacher training refers to training to teach subjects like math, science, social studies, geography etc. These English language schools only offer training courses and techniques for training English language teachers. They do not, and are not accredited to provide any training for any teacher in any of the content subjects. This is clearly evident in all of their marketing and advertising materials and also in the multitude of websites, as they only promote the training and qualifications related to English language teaching only and no marketing is aimed at any training for any content subjects at all (TEFL Thailand, 2017, and ECC Thailand, 2017).

The presentation practice & production method (PPP). The presentation practice and production method or (PPP) is a paradigm or model used to describe a common method of teaching language in schools or language centers. As the title suggests, there are three simple phases. Firstly the teacher presents the new language item to the students in a manner that the students understand. Then the practice stage allows students to practice the new language by the use writing or speaking under semi-controlled conditions prompted or guided by the teacher. The production phase is where the teacher takes a less guiding role and where the students apply the new language to produce more completed tasks on their own. The PPP method is still a common method used and taught by many language schools today (British Council, 2017, TEFL Thailand, 2017, and ECC Thailand, 2017).

Basic interpersonal communication skills (BICS). Experts like Haynes and Cummings make a difference between what language people need in social situations and technical and academic language. What they term as basic interpersonal communication skills (BICS) they see as conversational English. This means normal day-to day language and items that define social interactions between family, friends and the like. English language learners use BICS skills when they go shopping, socializing or at work and on the telephone. These skills are informal and many students, providing they are given the chances; pick them up quickly. This is evident in I-study. I-study is International study where high-school students go to live with an English native speaking family for eight months, this emersion program aids and sharpens their English language skills more akin to BICS (Haynes, 2007 and Cummings, 1981).

Cognitive academic language proficiency (CALP). CALP refers to strategies related to academic learning. This includes all the basic skills of listening, speaking, reading, and writing related to subject area content learning. Students need to have a certain amount of CALP skills in order to progress through school, university, & the various SAT tests, However CALP acquisition isn't only restricted to learning the language to complete content area subjects. Because of the nature of it, it includes skills more related to critical thinking for example, classifying, synthesizing, evaluating, and inferring. As a result of this process students studying in a CALP environment soon realize that the materials they use over time become more demanding with students' having to complete the various levels if they are to measure their progress (Haynes, 2007, and Cummings, 1981).

Cognitive academic language learning approach (CALLA). The CALLA approach to language learning was first developed by Anna Uhl Chamot and J. Michael O'Mally. It was designed especially for students with limited English. It is aimed at those students who learn English as a second or foreign language so that they can gain credits in the American public school system. The main aim of any of the three minor modules within the CALLA module system allow students to become more proficient so that they are able to know English content lessons. The three minor modules that make up the main CALLA teaching model are learning strategies, development of academic language and related curriculum (Chamot and O'Mally, n.d).

CALLA works by teachers collaborating together through a system of lesson plans based on activities that highlight thinking strategies to integrate academic language and learning strategies with content and language. CALLA lessons rely on the actual content of a lesson to determine the academic language & strategies that teachers need to teach. These lessons rely heavily on instructional supports when concepts and skills are first introduced and as students get more knowledge and confidence, teachers gradually release their responsibility and allow students to become independent learners (ESSU, 2011).

English for special purposes (ESP). The use of English for international communication has become increasingly important for many companies especially if it wants to participate in the now increasing global communications. For ESP the focus is on why the learners want to learn English. ESP students are usually adults and the reason why they want to learn English is most often related to their careers. An ESP program is designed to enhance the language of those people doing a particular task or career and it usually focuses; on business English. So therefore ESP is a language development theory that delivers language instruction that is used in a specific situation at work.

English as a foreign language and English as a second language. ESL stands for English as a second language the main differences are that ESL students are learning English in a foreign country as a second language so that they can either study or live in that country. An ESL class will probably be composed of many different nationalities all learning English as a second language. EFL students are

students who are learning English as a foreign language in their home country or any country that does not have English as its native language and therefore it is a foreign language. In this situation all the students in the class are most likely to be all of the same culture (CORE Languages, 2017).

Content Language Integrated Learning

The acronym CLIL was first developed by David Marsh, who was a member of an educational team working in the area of bilingual education in Finland in 1994. He describes CLIL as any lesson where both language and subject knowledge is being taught at the same time and where the language and subject knowledge are given equal attention. The term CLIL was also among a number of other related programs such as content-based instruction, immersion programs, bilingual education and so on (Marsh, 1994).

However, an important point between these programs is one of the degree; of integration and attaining a CLIL environment across the curriculum and the ability of teacher's to collaborate across it. This helps to build curriculum communities that support teachers and leadership: sharing, cooperating and establishing partnerships. Communication and cooperation creates clear benefits for students, teachers, curriculum designers and stakeholders (Coyle, 2014, Celaya and De Zarboe, 2010).

Today, CLIL programs have experienced exponential growth in Europe, and are used widely. But, because of the variations in funding, their success in the classroom varies from region to region; furthermore the research into this new area of

teaching using a second or foreign language is still growing and also the numbers of publications related to it. CLIL in Spain however, has received much attention over the last few years and CLIL programs there have received positive support from educational authorities and have been implemented in many schools across the country (Coyle, 2014, and Martin, 2011).

To apply CLIL to any English program means to have the will to apply an integrated approach by stressing important language & content points that are particular to a certain piece text, so that students can maximize the learning of both. It also requires teachers to devote time and planning to parts of speech that are content specific (Mehisto, 2009-10). A similar approach comes from the work of Short who quotes Krashen and Biber when they state that:

> "a critical element in effective English as a second language instruction is access to comprehensible input in English (Krashen and Biber, 1988)".

Comprehensible input for Krashen means making the English language as understandable as possible for the students. To achieve this, teachers' should present information that results from a commitment of preparation using a diverse amount of methods during teaching using realia, graphs, demonstrations, pre-reading, and pre-writing strategies. Further to this there should also be a strong focus on content where the student has been prepared by having the required language skills to learn that content, and the critical thinking skills needed to enhance the material (analyzing, synthesizing, and evaluating). The approach presented here also focuses on three

principal factors that apply equally to the language and the content teachers:

1. The use of multiple media.
2. The enhancement of student's thinking skills.
3. Student-centered organization of instruction (Short, 1991).

CLIL has its roots in other well established programs that emphasize the use of immersion teaching and have been enormously successful especially in Europe and Canada and considering that its success has been the result of strong support from the various education authorities and parents CLIL in Thailand and around Asia is still a relatively new idea (Mehisto, 2009-10). Suwannoppharat and Chinokul quote Mehitso and stress that if CLIL is to be successful schools must consider developing programs that not only develops content, language and integrated learning, but they must also deliver on them too. These programs must also require teachers to adopt practices that relate to effective teaching and build students communicative competence. But also follow the main principles of CLIL such as:

- Authenticity: The use of authentic materials, such as newspapers, and media.
- Multiple focus: Using a variety of activities helps develop the students' several skills at the same time. Automatic learning will occur.
- Active learning: Students are active in both the preparation and presentation stages.
- Safe learning environment: Familiar classroom where students feel safe.
- Scaffolding: Teachers are facilitators and peers are consultants through discussion. Teachers have to help students anytime and also to encourage them to be good peers in helping each other to learn (Mehisto, 2008).

Sheltered Instructional Observational Protocol (SIOP)

CLIL for this study is also closely aligned around the core elements of the SIOP model. The Sheltered Instruction Observation Protocol (SIOP) Model was developed to provide teachers with an instructional base, framework to facilitate instruction for English learners in content area teaching. By organizing methods and techniques, making sure that effective practices are implemented across a well-known curriculum.

The SIOP model is used widely across the United States but only in those states where strong curriculums allow it to be implemented across many subjects. Once again this implies, a strong commitment between administrators and teachers to plan and implement a range of strategies, to increase the academic levels of students. It is a well research-based model for promoting learning, especially students whose first language is not English, and is especially effective in the lower secondary levels of students. Among the many important instruction features within the SIOP Model the most important are:

I. Lesson Preparation

1. Content objectives clearly defined, displayed and reviewed with students

2. Language objectives clearly defined, displayed and reviewed with students

3. Content concepts appropriate for age and educational background

4. Supplementary materials used to a high degree

5. Adaptation of content to all levels of student proficiency

6. Meaningful activities that integrate lesson concepts with language practice.

II. Building Background

7. Concepts explicitly linked to students' background experiences

8. Links explicitly made between past learning and new concepts

9. Key vocabulary emphasized (e.g., introduced, written, repeated, and highlighted for students to see)

III. Comprehensive Input

10. Speech appropriate for students' proficiency levels

11. Clear explanation of academic tasks

12. A variety of technique used to make contents concepts clear

IV. Strategies

13. Ample opportunities provided for students to use learning strategies

14. Scaffolding techniques consistently used, that support student understanding

15. A variety of questions or tasks that promote higher-order thinking skills

V. Interaction

16. Frequent opportunities for interaction and discussion

17. Grouping configurations support language and content objectives for the lesson

18. Sufficient wait time for student responses consistently provided

19. Ample opportunity for students to clarify key concepts in their native language

VI. Practice/Application

20. Hands-on materials for students to practice using new content knowledge

21. Activities provided for students to apply content and language knowledge

22. Activities that integrate all language skills

VII. Lesson Delivery

23. Content objectives clearly support by lesson delivery

24. Language objectives clearly supported by lesson delivery

25. Student engaged approximately 90% to 100% of the class period

26. Pacing of the lesson is appropriate to students' ability levels

VIII. Review and Assessment

27. Comprehensive review of key vocabulary

28. Comprehensive review of key content concepts

29. Regular feedback provided to students on their output (during & after lesson)

30. Assessment of student's comprehension & learning of lesson objectives throughout the lesson (Echevarria, Vogt and Short, 2000).

The SDAIE Model

The model, entitled, Specially Designed Academic Instruction in English (SDAIE); was first developed by Michael Genzuk, Ph.D. in 2011. He developed this theory for language minority students in California. It particularly refers to an eclectic approach to instruction in the content areas of science and math. SDAIE was designed for intermediate fluency level students who have already attained some amount of literacy in the target language. There are six main component parts of the model thus:

1. Tap Prior Knowledge. Teachers should have a clear understanding of student's prior knowledge of the subject so that they can build on that.

2. Contextualize the lesson. Use visuals with strategy that allows students to use content vocabulary in context. Students will not succeed if they lack content specific vocabulary. Teachers need to be aware of this so that all students can reach their full academic potential.

3. Modify the use of the textbook (less is more). This may involve re-writing texts or parts of them to make them easier to read.

4. Provide a positive affective domain. To get the most from students, teachers should create a positive atmosphere and a low anxiety environment.

5. Teach study skills in all the major literacy areas like reading, scanning and skimming, note-taking, writing, are all the skills students need to learn that will enable them to succeed in all curricular areas.

6. Provide alternative forms of assessment. Tests require good literacy skills and since EFL students don't possess as much as native speakers, teachers have to rethink how the importance of performance based assessments. This can be achieved by interviews to find out what the student learned and what they need to know. Portfolios are another way for teachers and students to assess academic growth. Students could also devise CD'S, videotapes and audiotapes, group or individual projects, and experiments. Teachers can ask students to write exams questions that the students feel they can answer well (Genzuk, 2011 and Tinney, 2007).

The Zone of Proximal Development and Scaffolding

The zone of proximal development. The zone of proximal development or the (ZPD), is most attributed to Lev Vygotsky and it is considered a classic theory. It is related to the idea of a conceptual "zone" that is imagined between what the student can do / know and what they are prepared with help. This 'actual developmental level' is what the student has already been taught and is characterized by mental development retrospectively while the zone is characterized as the prospective level of development (Brush and Saye, 2002).

Soft scaffolding. Soft scaffolds begin with an understanding of what students are responding to verbally, and to diagnose their understandings on-the spot with verbal supports when needed. For example, if a student doesn't understand the concept of colonization the teacher might help by asking students to think about a country which has full control over another country then the teacher may indicate which readings and or documents support such theories (Brush and Saye, 2002).

Hard scaffolding. Hard scaffolding on the other hand is the idea of using tangible objects that are planned in advance of instruction. These support structures can be anything from a picture, poster, or even items like videos, and hyperlinks linked to software that can be embedded in to multimedia to provide students with a more 3 dimensional support. Hard scaffolds provide the value of reality to any kind of instruction and students can actually examine them for themselves (Brush and Saye, 2002).

Bandura's Theory of Social Cognition

If we understand Bandura's social-cognitive theory in that learning is a social phenomena that exploits the harmony created in the social interaction between people. It allows opportunities for teachers to model their teaching and for students to observe. In this theory, the teacher has more than one role to play. Instructional strategy is best exemplified using models which best suit learners needs. By this it means, either people as models or by the use of video, or some kind of web-based media, that can bring students together, and so aids self efficacy and builds confidence. Behavior is also important as it implies creating the right atmosphere for

learning which should be rich in examples so that students can imitate them. Teachers should also stress the importance guiding students towards learning goals (Drolet, 2012). Self-regulation theory is also important where teachers should encourage students to adopt strategies that can help to trigger more self-awareness, and more self-regulation in what they do (Siegle and Reis, 2014).

The 8 C's of Engagement

This theory highlights the importance of designing teaching that enables students to concentrate on their work and to be more engaging. Incorporating aspects challenging exercises but also engaging students understanding through curiosity and controversy. The 8 C's of engagement for Silver & Perini are as follows.

Competition: During student's academic activities.

Challenge: Providing a level appropriate challenge that students love to do

Curiosity: Being curious makes them look and ask what it's about.

Controversy: Giving opportunities for students to express opinions about subjects.

Choice: Giving students a choice also allows some autonomy.

Creativity: Allowing students to design and create or illustrate their comprehension.

Cooperation: Group and any opportunity to integrate and have shared activities.

Connections: Integrating subjects (Silver and Perini, 2010).

Building Background Knowledge

The use of background knowledge is also related to increasing student's engagement and concentration time while studying (Tze-Ming Chou, 2011). Activating prior knowledge is a valuable learning strategy because it provides

students with an opportunity to connect to previously taught information it makes learning easier & it makes teaching easier too (Alexander-Shea, 2011). The use of the term background knowledge and prior knowledge are often used interchangeably and both terms mean the same thing. The most common use of the term is most often used in content-area reading when recalling the known background knowledge often used to associate what the reader already knows whilst using reading comprehension strategies (Strangman, Hall, and Meyer, 2003).

Marzano emphasizes the strength of the research that relates to the fact that what students already know about something strongly correlates to how well they learn new information. What is important is the emphasis of how students acquire background knowledge through vocabulary acquisition and practice using it. For example, when a student hears the word "store," that student will pull all the background knowledge that connects "store" to grocery store, convenience store, department store, etc., only if the student has a memory of that word will it allow them to explore the different kinds of stores (Marzano, 2004).

Model Development Theory

Instructional design models are developed to clearly define the activities that guide the development of a specific task of learning. Models of learning can also allow the teacher to communicate the purpose and reason behind a theoretical teaching strategy. The framework of any model needs to be quickly understood when viewed in its visual form and also allows the teachers to view all of the major component parts that are required to complete a period of learning (Gutierrez, 2015).

Kearsly & Culatta explained that as instruction develops teachers must also be familiar with a wide range of educational technologies that are also important in instruction. Instructional models facilitate all kinds of learning and provide a platform for planning further and enhanced instruction. Models also allow teachers to present instruction in a simple and meaningful manner. They define their view of models for the fundamental principle of instructional when they state:

"The process by which instruction is improved through the analysis of learning needs and systematic development of learning experiences. Instructional designers often use technology and multimedia as tools to enhance instruction design" (Kearsly, 2016).

For Mohammed and Elkhider instructional models guide the development of instructional practices that aims to provide predictable results. They also provide the learning infrastructure that allows instruction to be implemented so that learning can take place. Their studies; on models answers the questions of how people learn and how they use the information processing model as the prevailing theory in cognitive psychology. They conclude that the model consists of three types of memory (sensory, working, and long-term) that work interchangeably to encode incoming information. For successful learning, materials must be processed in working memory which is the thinking skill that people use when a certain action is required and the ability to recall relevant information on the spot during an activity (Kulman, 2017). However, working memory has a very limited duration & capacity but is considered a critical factor when designing instruction (Khalil and Elkhider, 2016).

However, to develop instructional models, their design should be the result of a process beginning with analysis, followed by design then develop materials for these goals, then implementation and finally evaluation and revision of the process. And although today in many schools and universities, many models have been designed, and are used extensively, the elusive search for models that emphasize the benefits of utilizing long-term memory i.e. elaborative rehearsal models and not those that perpetrate maintenance rehearsal models continues (Khalil and Elkhider, 2016).

Maintenance and elaboration models. Students' processes information in one of two ways: maintenance or elaborative rehearsal. Maintenance rehearsal, involves continuously repeating the material, either reading or sub-vocalization. It is often called rote memorization. It is not an effective method of learning academic materials because it only allows the learner to hold information for a short period of time (Moore, 2017, and Wixted, 1991).

Elaborative rehearsal models are highly successful in linking and storing newfound information that makes learning more meaningful, by making associations with information already known. For example when students are reading a piece of text they can link pre-taught information like a personal experience, to the new information. The best example of this is any theory or subject that has been pre-taught like vocabulary or any other major theory that was considered important by the teacher through planning or the use of another model prior to reading the main text (Penn State, 2016). Researches has consistently shown that elaborative strategies are much more effective in retaining information such as in the work of Simsek and

Balaban (2010). They established that a wide range of key elaborative strategies contributed far more to the performances of students than other strategies.

Critical Thinking Skills

Bloom's 1950's model is one of the classic theories in education. It consists of a myriad of theories that aid student's development mainly connected to developing viewpoints, & reasoning (Lai, 2011). But also skills like hypothetical & deductive thinking, prediction, using reasoning, analysis, and debate, along with self-assessment (Shakirova, 2007). It is also important to provide resources, and models to encourage students to become more engaged in it (Snyder and Snyder, 2008 p.1). But to do this effectively students need a certain amount of background language knowledge if they are to develop the ability to express any of them. However it has been difficult for educators to determine its most appropriate method of instruction which has given rise to many definitions examples Facione (2011), Broom (2011), Heong, Othman,Yunos, and Kiong, et al. (2011), Scriven and Paul, (2007,), and Paul and Elder (2008).

Bloom's revised taxonomy. The revised taxonomy is a hierarchy of six major categories of thinking skills that differ in complexity. It relates more to constructing what students have to do, by the use of verbs that relates to constructing objectives when planning lessons (Krathwohl, 2002). The new taxonomy is important in the construction of the model because it is related more to what students do in class.

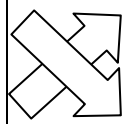
Original Domain	New Domain	
Evaluation: This means making comparisons and judgements based on facts.		**Creating**: Builds structures and patterns from various elements. Putting the various parts together to form a whole, with the intention of creating a new meaning or structure.
Synthesis This involves integrating and combining parts of items together in an original way.		**Evaluating**: Making valued and informed judgments from facts, materials.
Analysis This requires students to use parts of information to organized in to a whole.		**Analyzing:** Separating ideas into their component parts by distinguishing facts & inferences.
Application: Elaborate & use what they have learned uses concepts to solve problems.		**Applying**: Using learned concepts in a new situation.
Comprehension: This requires a little more understanding of the item of knowledge and requires moderate levels of elaboration.		**Understanding:** Comprehending the various meanings, and also translations, interpretation instructions & problems. Paraphrasing.
Knowledge: This is simple knowing about an item of knowledge it involves little elaboration.		**Remembering:** Recalling the previous learned information

Figure 2.1 Bloom's original (1956) Taxonomy & Krathwohl's (2002) version

Advance Organizers

David Ausubel first devised advanced organizers in 1963. It is related to the area of preparation and planning of lessons. This preparation is mainly concerned with the teacher preparing the students for forthcoming study by using methods to activate schema. This means pre-teaching vocabulary, grammar, and other essential parts of speech including reading and critical thinking. Joyce, Weil and Calhoun quote Ausubel that advanced organizers are designed to strengthen student's thinking and their knowledge of a particular subject at any given time (Joyce, Weil and Calhoun, 2004). Organizers help to process new knowledge in a creative way and helps, embed new information. It isn't necessary for organizers to be long discussions

neither do they have to be complex, just plain and clear terms should be used. They are best used when the students don't possess the relevant information or concepts in the study (Ivie, 1998). Advance organizers are best used to pre-teach complex and difficult subjects they should be:

• Organizational cues.

• Tools that help connect the known to the unknown.

• Frameworks for helping students understand what it is they'll be learning.

Advance Organizers should not be:

• A review of what was covered in the previous class session.

• Telling: students about tomorrow.

• Recalling, a personal experience and relating it to what will be learned.

• Stating the objectives of the lesson (Chen and Hirumi, 2009).

The Information Processing Model

The concept of this model has been designed to be similar to the stages of the information-processing model of learning. This model has been well researched and has been around for many years. The main theories of the model relate to the idea that individuals processes information, in a similar way to that of a computer in that it receives information and then follows a set program which stores that information and at the end is able to perform an output (McLeod, 2008).

STIMULUS →	Input processes →	Storage processes →	Output processes →	**RESPONSE**

Figure 2.2 Basic components of the information-processing model (unknown author).

How instruction benefits students best, is explained by the fact that students best learn when new information is processed this way. To do this effectively, activities that incorporate elaboration and connection must be part of instructional design. Instructional designers must also incorporate activities that build on and exploit background knowledge (Lutz and Huitt, 2003). The most cited referenced theory of elaboration for instructional design purposes is Bloom's revised Taxonomy (Krathwohl, 2002). The first four levels form a strict level of cognitive hierarchical thinking. However there is a problem among researchers about the order of the last two levels (Hummel and Huitt, 1994).

Transformational Leadership

First publicized by James McGregor Burns transformational leadership is a process whereby a person engages with others to complete a task and raises the motivation of the follower emphasizing the collective good for the community. For this study transformational leadership is applied to encouraging teachers to develop methodologies in teaching content. The model is divided in to various factors that describe four particular theories (Bass, 1999).

factor 1. Idealized influence or charisma describes those leaders who act as strong examples and role models for followers and followers try to emulate them.

factor 2. Inspirational motivation, describes leaders who utilize the advantage of discussion and emotional appeals to motivate people to contribute to the development of progress using tools that enhance the theory of team spirit.

factor 3. Intellectual stimulation is the idea that a leader inspires others to be creative and innovative and to challenge current practices and beliefs.

factor 4. Individualized consideration allows leaders a supportive climate in their management by listening to the needs of their followers and allow followers to grow by giving them personal challenges (Northhouse, 2012).

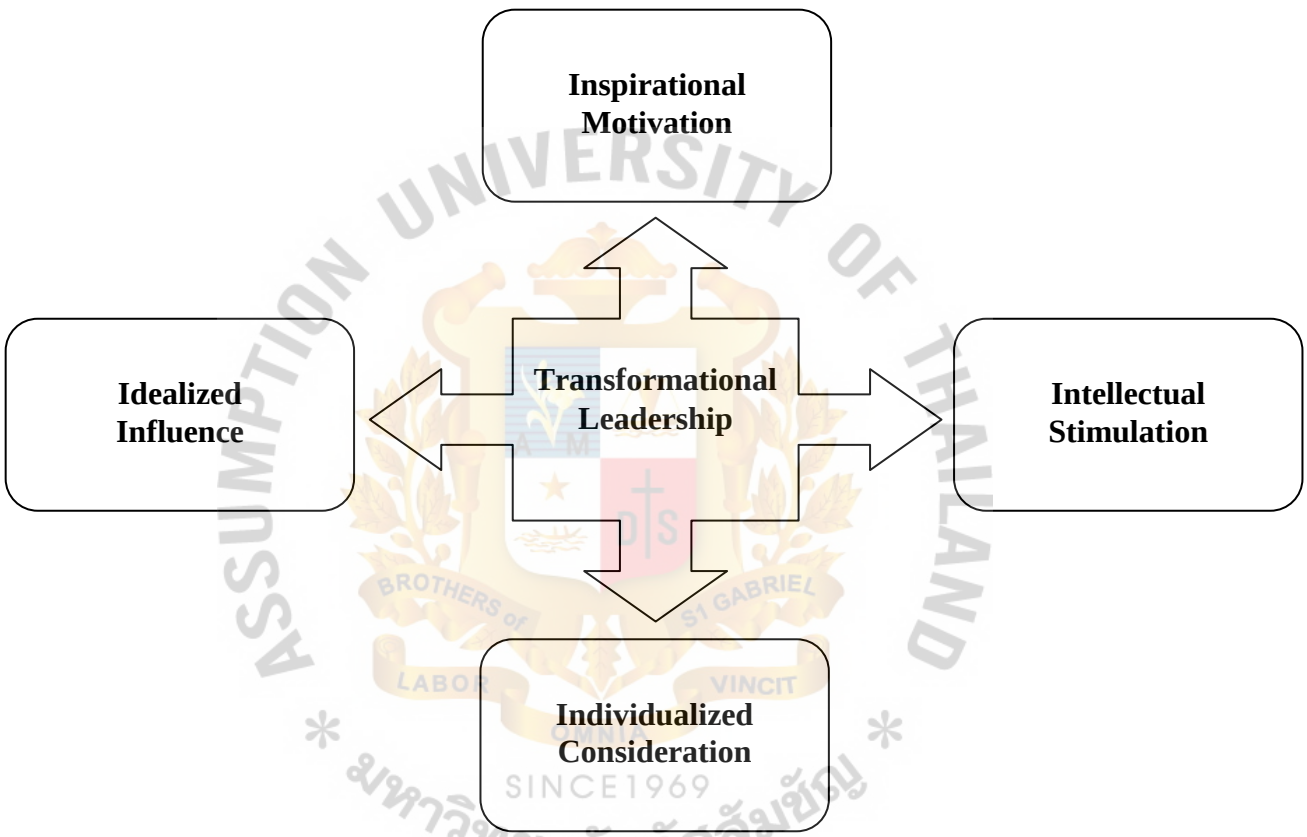


Figure 2.3 The components of transformational leadership (Northhouse, 2012).

Figure 2.3 shows that transformational leadership is the ideal theory to apply to this model because what is needed is a certain amount of valuable and positive change in a school system that positively contributes to student achievements. Individualized consideration is needed to coach teachers to apply new ideas. Intellectual stimulation is the degree to which the leader challenges current

assumptions, takes risks and solicits followers' ideas. Inspirational motivation is needed to articulate a vision of student achievements and finally idealized influence is the role model for high ethical behavior that instills pride, gains respect and trust between teachers and administration.

Instructional Leadership

Instructional leadership matters, especially if any school wants to improve student achievements; and that is a simple fact. The numerous studies that span the past three decades make a strong connection between good school instructional leadership and improved student outcomes. Within these studies instructional leadership has demonstrated time and time again that it has improved increased attention, recruitment of good teachers, and much more besides (Țepordei, Labar, and Cuciaci, 2015, Hallinger, 2005 and Sergiovanni, 2005).

What should also not be ignored is the fact that principal preparation and development programs must emphasize the role of principals not only as school leaders but also as instructional leaders and this should be disseminated to teachers too who can also adopt leadership practices. This emphasis on the development of instructional leadership practices was driven in large part by the effective schools movement of the 1970's and 1980's and has since been renewed because of increasing demands from governments and stakeholders that school leaders and their teachers should be held more accountable for the student performances that they produce (Hallinger, 2005).

This leads to other aspects worth a mention and that is the quality of the organizational management system and procedures of the school that is more often a reflection on the leader who runs it. The point here is the emphasis on the quality of the teachers and the teaching they provide, which in all cases if not many, is a strong reflection on the decisions made by the school leader who employs them in the first place. In other words what happens inside the classroom is mostly a result of the decisions made by the school leader although, indirectly. This means, in effect, that school leaders can have quite an effect on student achievements simply by the teachers they hire, but also how they allocate those teachers to their classrooms, how they take care of them whilst in their employment, and also how they develop opportunities for them to improve their teaching (Horing and Loeb, 2010).

To have an effective school where students and teachers know what is expected of them, the leadership philosophy of the school must combine all of the traditional school leadership duties such as teacher evaluation, recruitment, budgeting, scheduling, and the like, that facilitate their commitment to teaching and learning. However to be an effective instructional leader is more specialized and should involve all teachers, and they should be encouraged to get involved in the more academic issues in the school like curricular and instructional issues that directly affect student test scores and overall achievement in the class. To achieve this schools must recognize the most important people for this to happen those being 1) School superintendents, curriculum designers and coordinators. 2) School principals and assistant principals 3) Instructional coaches (all the teachers) (Cotton, 2003).

Joyner (2005) points out 5 of the most important elements of any instructional leadership philosophy for any school that is serious about teachers and students classroom achievement:

1. The prioritization of all activities that relate to teaching and learning. These must be consistently set above al other school priorities. Although teachers may have other duties teaching and learning must be at the top of the list.

2. Teachers and school leaders should also prioritize research that is especially related to academic and literacy.

3. A strong focus on how they align their curriculum, including curriculum mapping, monitor instruction, assessment, and the standards that go with them. But these must be connected if there is no connection, student achievement will not happen.

4. The use of data analysis for monitoring students as well as teacher's performance. Instructional decisions must be made from this data so that it guides instruction and also teacher's professional development and also for any intervention needed.

5. What is also required and is most complex to achieve is for school leaders to create and develop a culture of continuous learning throughout the school. Chase and Kane state that good and effective instruction is one of those skills that can never be perfected. But all teachers can benefit from any additional time and leadership support that is related to improving their instruction and it is especially effective when it is backed up by monitoring and support and encourages new learning (Chase and Kane, 1983).

Instructional Design

Robert Gagné' was the first to devise the lesson plan structure & developed a system to train air-force pilots during World War 2. He assumes the importance of

a key instructional sequence, which is the nucleus of good instructional planning thus he devised a nine-stage instructional process that emphasis planning and application of activities that promotes the necessity of cognitive and intellectual skills thus:

1. Gaining attention (reception).
2. Informing learners of the objective (expectancy).
3. Stimulating recall of prior learning (retrieval).
4. Presenting the stimulus (selective perception).
5. Providing learning guidance (semantic encoding).
6. Eliciting performance (responding).
7. Providing feedback (reinforcement).
8. Assessing performance (retrieval).
9. Enhancing retention & transfer (generalization) (Gagne, Briggs and Wager, 1992).

Today, Gagné's nine-point lesson plan continues to be used widely, although many teachers have re-created its sequence in various forms for new subjects not available to him at the time he developed it. But the principle remains the same that of which helps to build a framework and to situate the events of that instruction in their proper context. But also which is used to prepare and deliver various content in any subject in support of strong instructional objectives (Gagné', 1985).

The Evaluation of Content Materials

It is often difficult to teach English language learners content subjects because of the esoteric vocabulary and dense text that makes reading difficult for EFL students. The main reason is related to a general lack of background information.

Brown (2007) recommends a wide range of strategies for making texts more comprehensible. They circulate around the idea of providing background knowledge and scaffolding materials to ready students for the main task of reading:

- Content graphics.
- Provide an objective of a unit.
- Demonstrate key questions.
- Rewrite or adapt the texts (Brown, 2007).

A rubric, used by Kremer (2007) for the Utah State Education panel is a more detailed example of how to evaluate content materials use the following list:

- Meets core standards and objectives.
- The levels and kinds of process skills is appropriate.
- The material is age appropriate.
- How pedagogically sound the materials are.
- The print and font sizes that match the intended grade level.
- The amount of and the design of the illustrations, and graphics.
- How much the content reflects a diverse population.
- Do materials provide development of healthy attitudes and social values.
- Materials demonstrate some critical thinking (Kremer, 2007 ch. 4).

List Group Labeling

List group labeling (LGL) was first conceived by Hilda Taba in her book Teachers' Handbook to Elementary Social Studies (1967). It is a pre-reading strategy designed to help students make connections to prior knowledge to activate students'

to a particular concept, to improve existing vocabulary. The rationale is based on categorizing words to help students organize new words and concepts in relation to already known words / concepts. Students' activation of prior knowledge then aids them in making inferences and elaborations that could lead to deeper understanding during reading. Many teachers also use it in other curriculums to help students focus on background knowledge. In that all the exercises are designed to recycle these words in their various inflections using students known language (Taba, 1967).

Blended Learning

Blended learning involves the combination of two teaching methodologies including a technology-based method. However many educational institutions also blend other subjects together like language and content. Over the years some models have developed for example; A Learning Ecology Model by Sun Microsoft Systems (Jones and Turner, 2008). A successful blended learning course needs motivated students, and a well-designed course of instruction (King and Cerrone, 2014).

The approach to blended learning here is that the ideas of blended learning can be adapted to suit teaching content and English language together. In particular by using powerful technological tools like websites and communications such as, blogs, video, audio, and power point in conjunction with direct instruction. Most teachers use some kind of blended learning even if they are unaware of it (Higgins and Gomez, 2014).

Qualitative Content Analysis Methods

In all kinds of research the investigation begins with a research problem based on trends or on the need to explain why something happens. Reviewing literature in research has two roles. Firstly to research the literature to document the importance, of the issue in the study. Secondly the documents allow researchers to identify questions for the study to obtain measurable data (Cresswell, 2012). Cresswell continues with a six-step approach to content analysis that, are not always taken in sequence thus:

1. Selecting, reading and organizing by coding the data for analysis.
2. Using the codes to develop a general picture of the data-descriptions & themes.
3. Representing the findings through narratives or visuals.
4. Interpreting the meaning of the results by reflecting on the impact of the findings.
5. Conducting strategies to validate accuracy of findings (Cresswell 2012, c8 p.236).

The main aim of qualitative analysis is text interpretation, and it can be applied to all kinds of documents. This kind of analysis starts with a plan and the material to be researched is subject to a step by step: process where the material should be divided into analytical units ready for analysis (Mayring, 2000). What is important in the interpretation of text is that researchers are looking for multiple representations of texts from various authors and sources (Krippendorf, 2004).

One of the main characteristics of qualitative research is that it is best used when researching a problem in which little is known about the variables that need to be explored. The literature might produce little information about the idea of the

study, and researchers need to learn more from the participants by carrying out research. For example, the literature may not produce enough of a particular kind of study because it may not have been examined sufficiently enough in any prior literature.

A second characteristic of is that the literature tends to play a less substantial role at the commencement of the study than in quantitative research. This is because the researcher may review the literature only to justify the need to study the research problem, but the literature may not provide the main direction for research questions. This is because qualitative research relies more on the views of participants in the study and less on the direction identified in the literature by the researcher. Data is collected to learn from the participants in the study and this helps to build recorded data as the study proceeds. At this stage general questions are formed and these will change and be refined as the study progresses examples are interview questions. Another important characteristic of qualitative research is the way in which the data is collected and analyzed. Initially text is harvested and divided into groups of sentences, often called text segments, and then the researcher determines the meaning of each text segment. As opposed to using statistics, researchers analyze text segments to describe the central idea under study. From this themes are formed and a rich, complex picture emerges. Researchers make an interpretation of the meaning of this by stating a personal reflection about the significance of the findings learned during the study (Cresswell, 2012).

A more detailed approach is inductive content analysis that has had little previous studies recorded or when the data is fragmented or there is not enough former knowledge about it. With this approach inductive data generally moves from the specific to the general, so that particular instances are observed and then combined into a larger whole or general statement again with all content analysis methods preparation, organizing and reporting are implemented (Satu and Kyngaïs, 2007).

The related literature for this section shows two themes educational psychology and teaching strategies and even considering the multitude and eclectic range of theories that are related to teaching content and language, it seems they have similarities. These similarities include references either directly or indirectly to the fact that teachers have to plan and prepare carefully in advance of every lesson. This involves utilizing aspects of various psychology and practical teaching strategies that include critical thinking skills at its core. Differentiation for example has at its' core strategies that prepare students by pre-loading them for forthcoming lessons. CLIL & CALLA also have these strategies, but take them several stages further.

Part III Related Research

Differentiated Instruction

Logan's research, which was entitled, *Examining Differentiated Instruction:* Teachers respond, found that although differentiation is a compilation of many theories more research is needed. This study serves to expose what teachers' saw what differentiated instruction was and what it was not. The study also helped to clear up some myths of differentiation with a clearer understanding of it. The

objectives were to examine what teachers specify as key components of differentiated instruction. To find agreements on what is essential to it and then to examine the myths surrounding the practice.

The study was conducted in five schools in Georgia and 141 teachers took part. Frequency and percentage tables were designed to record teachers' responses. The second step displayed the data collected through a five-point likert scale survey. Finally, in an effort to determine to what degree participants agreed or disagreed per question, the examiner chose to add the sum of strongly agreed to the sum of agreed to get a combined total so percentages could be calculated.

The findings discovered that many teachers agreed that they should collaborate more. Secondly, teachers should also differentiate content & materials. They further agreed; thirdly, 90.7% disagreed that there is only one way to differentiate instruction. Fourthly, 85.8% of teachers disagreed that all students must demonstrate mastery on the same day of grading. Also 79.4% of teachers disagreed with the myth that differentiated instruction creates unfair workloads among students. Some recognize that differentiation is about providing challenges and motivating students differently. Teachers were split on the issue of differentiation being only individualized instruction. Finally, 73.0% disagreed, with and 21.9% agreed, and 4.9% were unsure of the myth that differentiated instruction does not prepare students to compete in the real world (Logan, 2011).

Content Language Integrated Learning

This research explored the title: *Integrating Reading and Writing into the Context of CLIL Classrooms.* Using comparison essays the main research question was related to finding out if the experimental (CLIL) group - would make significant progress in developing skills and grammatical competence in relation to the controlled group attending a traditional EFL class. The first objective was to examine how the CLIL group used writing to make progress. Secondly to examine how the non-controlled group compared with the controlled group. The survey was conducted at the Academy of Technology and Humanities in Poland in 2012 and the groups were undergraduates of the University in the International Relations department studying History. They were selected randomly from a larger population of second year students completing writing assignments that were part of the CLIL framework especially for writing in this field of study.

The major findings, analysis and results were recorded in frequency and percentage tables. They recorded that the experimental (CLIL) group demonstrated significant progress in the case of academic reading and writing tests. The control group's results showed a minimal progress compared to the experimental (CLIL) group (Loranc and Paszylk, 2009).

Transformational Leadership in Schools

Rupšienė, and Skarbalienė's research entitled: The Characteristics of Teacher Leadership was designed to measure teacher's leadership traits to determine any connection between with their socio-demographic characteristics. Conducted in

Lithuania on 394 teachers the study was in two parts. Part one was concerned with teacher's aspirations and beliefs of what leadership is and part two was more concerned with the teachers' socio-demographic status.

The study had two objectives. Firstly to reveal what characteristics of the leadership are typical to teachers in Lithuania. Secondly, to determine the connection between the leadership characteristics and socio-demographic characteristics of teachers, regarding subject, experience, education, qualifications, and training. The survey used a variety of schools ranging from principle, secondary, and primary. The article immediately points out the fact that development of leadership of teachers is more substantial for student development than that of leadership for school principle.

The major findings resulted in showing that the average age of the respondents of which 87 % were women was 45.86 of which 17.9 % held senior positions in schools either as heads or as deputy heads. The main details of the research showed that teachers who showed a high standard of personal education and with many years of in service correlated with equal levels of experience were regarded with high respect and weighted very heavily in the research.

The analysis stated that the overall characteristics of school leadership in Lithuania firstly related to teachers years of experience, and their academic levels. The respondents rated their sense of responsibility foremost with their high personal standards second and their strong vision and loyalty thirdly. It was also found that, teachers from a general education background who participated in development

courses also had a high sense of personal standards (Rupšienė, and Skarbalienė, 2010).

These three research reports clearly demonstrate how important these theories are to their respective communities. They also demonstrate how important research articles are when experienced teachers utilize their experience for the benefit of them. They also go a long way to further clarify what is important in content and language studies too. Initially, it is the need for a determined approach by all teachers to adopt differentiation strategies for all of their classes. However for this study it is Loranc & Paszylk's 2009 study that is highly significant for this study because it encapsulates many of the ideas of integrating and differentiating reading and writing strategies that this study has also tried to highlight and also given the fact that not many studies have been done on CLIL in this region.

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the research methodologies including the research procedures, sources of data, population and sample, research instruments, validity and reliability, and data analysis for each of the objectives in the research.

Research Objectives

1. To explore the instructional methods used in content subjects in English.
2. To identify the instructional methods used in content subjects in English.
3. To identify how students learn content subjects in English.
4. To develop a model for content and language integrated learning.

Research Design

This was a mixed method approach comprising analysis of quantitative & qualitative methods and was designed to find out firstly through content analysis what were the most important teaching strategies that best suit a content class when English is the student's second language. Then it was to find out what teachers were actually doing in these classes by questionnaires and interviews and thirdly, it was to find out the learning activities of the students' who study content subjects also using questionnaires. Then it was to devise a model to improve both the teaching and learning by those teachers and students by adopting strategies in the content analysis.

Research Procedure

The research procedure was conducted in four parts, one part for each objective thus: For objective one, a content analysis study was conducted on books, articles & websites. From this, key data was identified, relating to best teaching methods for math, science & social studies in English. These were recorded onto coding sheets. And in turn these codes formed a diagram system to analyse the relationship between the codes. They also formed the basis for the research questions the interviews & as a basis for the final model.

For objective two, questionnaires and interviews were devised from the content analysis to find out what teaching practices teachers used in content classes. They were also the basis for interview questions for the program managers of each school.

For objective three, questionnaires were devised, from the content analysis study to find out what learning practices students used in their content classes. The questions focused on what students actually do when studying math, science and social studies in their English programs.

For objective four, this was completed once the results of objectives two and three were completed. The model was devised, based on the best practices from the content analysis and the research and was validated by twenty expert teachers.

Research Objective 1

To explore the instructional methods used in content subjects in English by content analysis.

Population. The total population for this objective was the amount of books & articles held at Assumption University Library which amounted to 1, 255. Other online articles were also used.

Sample. A total of 354 items were used. This included 103 on-line articles. It also included 215 books, from the total population of 1, 255 books from Assumption University Library. A further 36 websites were also utilised. All these items were related to content and or language teaching. Others concentrated on content teaching methods and theories that integrated both English and content subjects.

Research instrument. The research instrument, for research objective one was a content analysis study that was implemented through the following stages:

1. Stage one, items were sourced and organized in to two main categories. One category related to items of English language and the other related to teaching content subjects in English.
2. Stage two, involved devising a coding system to register the major teaching methods stated in the items as being important. The codes consisted of a reference to, a book or document, then the page number and also the paragraph number.

3. Stage three, involved reading the items & highlighting any method / theory stated in the texts which was conducive to good learning or teaching practice.

These methods were recorded as short phrases by copying and pasting them directly from the original source and giving each one a code, then placing them into a specific group in the coding sheets to account for them. This was done in order to build up a big picture to what were the important instructional practices used when teaching content subjects in English. Table 3.1 shows a sample of a coding sheet.

Table 3.1: *An example of a coding sheet for CLIL strategies.*

CLIL Codes 1 (Vocabulary teaching methods)	
A = Article B = Book D = document W = Website P = Page number C = Chapter	
Code	Text segment
CLILB1P12C2	Provide systematic vocabulary instruction for all grades across the curriculum.
CLILB1P12C2	Frequent, varied, and extensive language experiences that offer opportunities for wide reading, individual word instruction, word-learning strategy instruction, and the development of word consciousness.

Data analysis. The next step was to further analyze, what the big picture said about the items and to interpret the meaning as results. To achieve this, coding sheets were used that allowed the researcher to see what themes emerged from the entries, collapse some themes and integrate them. At the end of this process eight major themes emerged from the mass of data. These entries were further copied from the coding sheets on to diagram files to analyze their relation with each other to complete the objective.

Validity and reliability. To ensure the validity of the content analysis result the researcher devised a system in which five independent experts agreed to validate the content analysis process. These experts all had a minimum qualification of a Bachelors degree and were currently working as either an English or content teacher or in the position of administrating teachers in some way. The experts were given a copy of the completed content analysis study and asked to comment on the process on how it was done. Once the experts read the report and stated any improvements, the researcher made amendments and then asked the expert to validate the changes, a copy of this process, is in Appendix B.

Research Objective 2

To identify the instructional methods used in content subjects in English.

Population. The total population of the teachers consisted of 140 content teachers who taught math, science or social studies as content subjects in the English programs of the three schools to Mathayom one, two and three of Saint Paul de Chartres schools in Thailand. Table 3.2 shows the number of teachers that fit, this criteria and a list of all of the schools in Saint Paul de Chartres is listed in appendix D.

Sample. This study related to those teachers who taught math, science and social studies in Mathayom one, two and three in three schools during the academic year of 2015. Table 3.2 shows the number of teachers that fits, this criteria. Although the researcher applied the Krejcie and Morgan sample size chart to determine the numbers for the survey, no sampling was actually used for the teachers, because the difference between the numbers of returned questionnaires and the sample size was nearly the same as the sample size.

Table 3.2 *Sample of the study of teachers from the English programs.*

	School Name	Foreign Teachers
1	Saint Joseph Bangna	30
2	Saint Joseph Convent	60
3	Saint Francis Xavier	50
Totals		140

Source: Registration office, Saint Paul de Chartres Schools (December, 2015).

Research instruments. The main research instruments for objective two were the use of questionnaires and interviews for the teachers. These questions for the questionnaire and also the interviews were derived from the practices found in the content analysis study. The questionnaire was designed to draw out the main teaching practices used by teachers in their content classes and consisted of the following variables.

1. Demographic data included class, gender, nationality, language, subject taught and the number of years they had taught at the school.

2. Questions using a five-point likert scale were used to record the data. A five-point scale allows better options than a seven-point scale, as too many options may be confusing. The teachers were asked a total of sixty-four questions related to what activities they do when teaching the subjects. Questions one to seven were based on academic language. Questions eight to fourteen were based on their teaching of grammar and questions twenty-three to twenty seven asked about teaching writing. Questions twenty-eight to forty were related to differentiation while forty-one to forty-six were related to technology. Questions forty-seven to fifty-two were related critical thinking skills and questions fifty-three to sixty-four related to preparations for teaching. A sample of the teacher's questionnaire is contained in Appendix E.

3. Interviews were also conducted on a math teacher, a science teacher and a social studies teacher transcripts are contained in Appendix I.

Validity and reliability. The validity of the research instrument; was validated by five experts who held Masters degrees, and a list is contained in Appendix F. The researcher gave the questionnaire to the experts and a copy of the research objective to determine whether the questionnaire was appropriate enough to measure the research objective. The experts validated the questionnaire by using an item of congruence table, giving a score for each item. A plus one score, if the item matched the objective and a minus score if it didn't and a zero score if it matched but was unclear. After comments from the experts, the researcher revised the questionnaire and the experts gave their final approval. To confirm the reliability of

the research instrument for objective two a pilot test was conducted on 60 teachers from two of the schools. Reliability refers to the consistency of an assessment's results under certain conditions (Gliem & Gliem, 2003). Table 3.3 shows the Cronbach's Alpha coefficient score for the objective.

Table 3.3 *Chronbach's Alpha scores for teachers'.*

Construct	**Chronbach's Alpha Coefficient**
Academic language	.26
Communication strategies	.72
Curriculum integration	.74
Materials	.57
Critical thinking skills	.52
Differentiation	.62
Questioning & cuing	.58
Cooperative learning	.67
Total eight constructs combined	***.92***

Table 3.3 shows the scores from the teacher's pilot test. They indicate four constructs (communication strategies, curriculum integration, differentiation and cooperative learning) that show good ratings at .72, .74, .62, and .67 respectively. While three others (materials, questioning and cuing and critical thinking skills) at .57, .58 and .52 show acceptable ratings. The remaining construct (academic language) at .26 appeared low. To rectify this, selected questions were deleted because they were considered, inconsistent. This increased the degree of between-person variation and the average correlation and alpha for this group to an acceptable score of .57.

Collection of data. The collection of data for objective two was completed by the researcher writing letters to each of the school's Administrators asking for formal permission to complete a survey on the population. Once permission was granted, the researcher travelled to each school to deliver the questionnaires; during which time arrangements were made to collect them after the study was completed. The collection of data for the interviews was also carried out during this meeting. The return rate for the teachers was 100%.

Data analysis. To analyze the data for objective two consolidation tables showing percentage, mean, and standard deviation were devised and showed the results of the teacher's survey. This allowed for an accurate analysis of the instructional methods content teachers applied in content classes and from which were also derived the basis of the components of the model.

Research Objective 3

To identify how students learn content subjects in English.

Population. The population of the students consists of 1,523 students who study in Mathayom 1, 2 & 3 in English programs at three schools of Saint Paul de Chartres schools in Thailand a list of these schools is listed in appendix D. These three schools were identified because they had English programs. Because of this, these students were at an important stage in their academic life where serious study habits should start to become common practice, especially in content subjects that are also taught in English.

Sample. This study relates to students that were enrolled in Mathayom 1, 2 and 3 in the three schools during the academic year of 2015. Table 3.2 shows the number of students that fit, this criteria. The researcher applied the Krejcie and Morgan sample size formula (see appendix H) to the population of the students in the English programs for these three schools. The sampling technique that was used to select the sample from the respondent's research questionnaires was performed by a random selection of the questionnaires from each of the schools.

Table 3.4 *Sample of the study of students from the English programs.*

	School name	No. of students	Sample of the study
1	Saint Joseph Bangna	203	41
2	Saint Francis Xavier Convent	370	74
3	Saint Joseph's Convent	950	191
Totals:		1, 523	306

Source: Registration office, Saint Paul de Chartres schools (December, 2015).

Research instrument. The main research instrument for objective three was a student's questionnaire. The questions were derived from the content analysis study and the themes from it. The questionnaire was designed to draw out how students learned in their content classes and focused on math, science and social studies. The questionnaire consisted of the following sections.

Part 1. This part recorded personal data, including school, class, gender, nationality, student's main language & the number of years they had been at the school.

Part 2. This part recorded data relating to how students' learned in their content classes. The questions were grouped in such a manner so that the students could read

them quickly using simple, understandable language considering their age and academic levels they were also translated into the Thai language. Also, each question related to the same three subjects and students simply had to read the question once and apply an answer to each subject by ticking a box. Students were asked a total of sixty questions and they were grouped into sets of three 1.1 for math 1.2 for science and 1.3 for social studies to make it easier for students to provide the data from across the curriculum of math, science and social studies respectively.

Questions one, to six related to academic language across the three subjects. Questions seven and eight related to critical thinking skills while question nine related to students planning, presentation and speaking skills about math, science and social studies. Questions ten and eleven asked students about their use and learning activities related to using pictures and videos in class while question twelve enquired how often students worked in groups to collaborate and cooperate in the content classroom. Question thirteen enquired as to how often students learned with diagrams while question fourteen related to their course books.

Questions fifteen and sixteen related to how often students carried out projects and experiments across their content curriculum and question seventeen related to how often they used a dictionary across their curriculum. Question eighteen related to students' differentiation strategies in the class and question nineteen related to how often students used computers. Finally question twenty related to the frequency of questions used across their curriculum. A sample of the student's questionnaire is contained in Appendix E.

Validity and reliability. The validity of the research instrument was validated by five expert teachers who held Masters degrees and a list is contained in Appendix F. The researcher gave the questionnaire to the experts and information about the population. The experts then determined whether the questionnaire measured the learning practices students used in class. The evaluation of content validity is that the experts validated the questionnaires by using the item of congruence table, giving a score for each item. A plus one score if the item matched the objectives and a minus score if the item didn't match the objective and a zero score if it matched but was unclear. After comments and discussions from the experts, the researcher revised the questionnaire and asked the experts to give their final approval. To confirm the reliability of the research instrument for objectives two the researcher gave the questionnaire to sixty students from one of the schools. Table 3.5 shows the Cronbach's Alpha coefficient score for this objective.

Table 3.5 *Chronbach's Alpha scores for students.*

Construct	**Chronbach's Alpha Coefficient**
Academic language	.24
Communication strategies	.72
Curriculum integration	.73
Materials	.60
Critical thinking skills	.53
Differentiation	.63
Questioning & cuing	.62
Cooperative learning	.70
Total eight constructs combined	***.93***

Table 3.5 shows the scores from the pilot test for students. They indicate that three constructs (communication strategies, curriculum integration, and cooperative learning) show good ratings at .72, .73, and .70 respectively. While (materials, differentiation, questioning and cuing and critical thinking skills) at .60, .63 .62 and .53: show acceptable scores. The remaining construct (academic language) at .24 shows a low score. To rectify this, selected questions were deleted because they were considered, inconsistent. This increased the degree of between-person variation and the average correlation and alpha for this group to an acceptable score of .53.

Collection of data. To arrange the collection of the data the researcher wrote letters to each of the school administrators asking permission to complete a survey on the planned research population prior to commencement and a sample letter is contained in Appendix G. When permission was granted, by each school the researcher travelled to the schools location to deliver the research instrument to the head of the English program and made arrangements to collect them after the study had been completed. Then travelled to each school to deliver each research instrument to the administrator. The return rate for the students in the survey was 100%.

Data analysis. To analyze the data for objective three consolidation tables showing percentage, and mean scores were devised and displayed in tables. This allowed for an accurate analysis of the learning practices students applied in content classes and from which were also derived the basis for the components of the model.

Research Objective 4

To develop a model for content and language integrated learning. The components of the model were selected from the best practices, recorded from the content analysis and also from the data analysis from the research. It was then, validated by twenty expert teachers who commented on its contents & revisions made according to their comments. The criteria, for each teacher who validated the final model was that they had a degree in English language in a content subject and were currently employed as a teacher with at least five years experience.

Table 3.6 *The Criteria of Scale Interpretation*

For the interpretation of the mean & standard deviation of the collected data, the scale for calculating & the criteria for interpreting means are as follows.

Score Scale	Meaning	Description
1 - 1.49	Never	The mean at this level of practice is far below the expected level for an effective content lesson.
1.50 - 2.49	Very rare	The mean at this level of practice is below the expected level for an effective content lesson.
2.50 - 3.49	Sometimes	The mean at this level of practice has just reached the expected level for an effective content class.
3.50 - 4.49	Frequently	The mean at this level of practice is above the expected level of for an effective content class.
4.50 - 5.00	Always	The mean at this level of practice is very far above the expected level for an effective content class.

Summary of the Research Process

Research Objectives	Sources of Data, Sample	Research Instruments	Data Analysis
1. To explore the instructional methods used in content subjects in English by content analysis.	-The sources were 354 books, & articles related to instructional methods.	-Coding sheets -Diagrams	-Content analysis. -Validation from experts.
2. To identify the current instructional methods used in content subjects in English.	-Teachers who teach content subjects in English programs for Mathayom 1, 2, and 3 a total of 140.	-Questionnaire with a 5-point likert scale. -Interviews	-Frequency & percentage analysis mean and standard deviation.
3. To identify how students' learn content subjects in English.	-Students studying content subjects in English programs in Mathayom 1, 2 and 3 total of 1,523	-Questionnaire with a 5-point likert scale.	-Frequency & percentage analysis mean and standard deviation.
4. To develop a model for content and language integrated learning.	-Instructional leadership theory. -Results derived from objectives 2 and 3.	-The development of the model. - The focus group.	-Validation of the model by 20 independent experts.

CHAPTER IV

RESEARCH RESULTS

This chapter shows the results of the data analysis and is presented in four sections that are related to each of the research objectives already stated. Section one represents the results of objective one and is a summary of the data collected from the content analysis of the 354 articles books and websites. Section two represents the data findings of the teacher's data for objective two. Section three represents the data findings of the student's data for objective three. Section four describes the main components of the model that are based on the findings from the data from the previous three other research objectives. The research objectives were as follows:

1. To explore the instructional methods used in content subjects in English.
2. To identify the instructional methods used in content subjects in English.
3. To identify how students learn content subjects in English.
4. To develop a model for content and language integrated learning.

Section One

Objective One

To explore the instructional methods used in content subjects. Table 4.1 shows the results of the content analysis study on 354 items as a summary of the findings. They are displayed as highly important themes, relating to best teaching methods for the instruction in math, science & social studies in English. They also formed the basis for the research questions, the interviews & as a basis for the final model.

Table 4.1 *The results of the content analysis.*

Academic Language Questioning & Cuing Strategies

Math	Science	Social Studies
-students academic background -English vocabulary for math -integrated lesson plan -observe other teachers	-lesson plan -English vocabulary -adapt texts -from concrete to abstract -from oral to texts -context support to less context	-teach English vocabulary -language support -rewrite texts -plan scaffolding activities -critical thinking of texts -use videos & technology -plan questions

Communication & Cooperation Strategies

Math	Science	Social Studies
-group work -teachers collaborate & meet -observe teachers -plan materials together	-teachers collaborate -teachers teach key language to language teachers -literacy for science	-teachers to interact related to subjects & language -all teachers communicate -develop teacher leaders

Curriculum Integration

-language development prior to wide reading content texts
-strategies for word-learning & instruction for academic language including vocabulary journals
-teaching pre-fixes & suffixes prior to reading content texts
-strategies for schema-building before learners read the text
-co-operation between language & content teachers
-establish cooperative learning groups or peer tutoring
-project, enquiry & task-based learning strategies
-comprehension of text, questions, & information gaps
-follow-up activities reinforcing, develop language & content together
-breaking down information into manageable chunks
-checking learners' understanding, using questions, relevant feedback
-ability to adapt and exploit materials
-language & content teachers develop materials together
-use of realia and multimedia resources

Table 4.1 *The results of the content analysis cont.*

Questioning & Cuing Curriculum Integration		
-use prior knowledge -content literacy -features of text -learner centred strategies -use content based instruction strategies -questioning strategies	-use prior knowledge -experiential learning activities -teach in small chunks -interactive lectures -think/pair/share -use content based instruction strategies -critical thinking ideas	-use prior knowledge -teach across curriculum -use models -differentiate instruction -use questions -cloze exercises -critical thinking tasks -enquiry learning -create discussion
Curriculum Integration		
-pair & group work -cooperative learning -real-life problems -brainstorming -non-fiction reading -problem-solving -peer tutoring	-practical experiments -highlight texts -writing summaries -hands-on activities -graphic organizers -project based learning -use illustrations	-develop word banks -collaborative learning tasks -highlight vocabulary -scanning texts -use videos
Differentiation Questioning & Cuing		
Math	Science	Social Studies
-use learning stations -think-pair-share -questioning strategies -graphic organizers -tiered strategies -providing choices -reading comprehension & questions -a variety of representations of math concrete, pictorial, numerical & algebraic -math literacy -varied assessments -frequent assessments -problem solving	-science vocabulary -choice boards -tiered instruction -adapting texts -use technology -lab work -use of Blooms taxonomy -teach step-by-step -teach one-to-one -integrate curriculum -comprehension questions -adapt assessments -learning stations -peer teaching -graphic organizers -cloze exercises	-teach vocabulary -use Bloom's Taxonomy -integrate curriculum -subject integration -reciprocal teaching -making choice -graphic organizers -tiered activities -goal-setting -problem based learning -questioning strategies -cloze exercises -learning stations -peer teaching
Differentiation		
Math	Science	Social Studies
-real life problems -student collaboration -flexible group learning -writing math journals -run literature circles -group work -note taking	-students work in groups -work stations -student collaboration -allow students to report findings in various ways	-stations for students -group learning -cooperating groups -journal/essay writing -metaphors, & visuals -projects based learning -enquiry based practices

Table 4.1 *The results of the content analysis cont.*

Questioning & Cuing		
Math	Science	Social Studies
-teach in real-world contexts -build background knowledge -enquiry learning strategies -creative thinking skills -vary kinds of questions -problem solving situations -use Blooms taxonomy -teachers & students discuss -scaffolding academic language -step by step methods -discuss examples of problems and solutions	-pre-teach content language -foster creative thinking -inquiry strategies -use open-ended questions -deal with controversies -use real world problems -pupils to 'take a lead' -aid, develop judgments -value various ways of working -use questions with multiple answers or several equally correct answers	-strategies to pre-teach language -exploit prior knowledge -identifying text features including headings, charts/graphs/tables, illustrations, and maps -identifying unfamiliar ideas, concepts or words to work with later -reinforcing effort and providing recognition -using 'wh' structured, challenging questions & tasks
Critical thinking skills		
-frequent, short homework assignments that are logical extensions of classroom work -link practice in the content area to complex, real-life situations -opportunities for practice in solving problems -students complete independent practice assignments -utilize critical thinking skills in math -visually represent and organise problems in concrete examples such as drawings, graphs, hierarchies, or tables	-involving students in role-plays or simulations of historical events -organize discussions and debates which address more than one side of an issue -using television programs or read newspaper articles which express different viewpoints -students drive learning through questions with multiple answers or several equally correct answers -students take risks, make connections and see relationships allow for quiet reaction	-using drawings or images -asking questions about key ideas -summarizing & note-taking -comparing notes with those of other students -providing substantive homework and practice -students give an appropriate amount of time to think, that is, to prepare responses to questions -inquiry method in the class -group discussions -students work collaboratively to create quality questions based on any topic
Materials		
Math	Science	Social Studies
-visuals -graphics -concept maps -Venn diagrams -calculators, protractors	-charts -graphs & charts - computers -laboratory work hands on -books as support	-developing materials that practice critical thinking -use of visual aids -graphic organizers -drawings, posters, tables,

-course and writing books	-illustrations & pictures	maps, props, multimedia

The themes. The themes from table 4.1 were found to be the most prevalent methods, stated by the authors from the items in the content analysis. They demonstrate a strong focus on teamwork and leadership, guiding teachers to work together and the importance of communicative and cooperative practices across the curriculum pre-loading students with background knowledge that relates to content subjects. This way, students are able to build on their academic language knowledge as an aid to understanding their content subjects.

Table 4.2: *The occurrences of each construct from the content analysis.*

Construct	Math	Science	Social Studies	Totals
Academic language	32	91	120	243
Communication strategies	40	40	31	111
Materials	30	40	20	90
Cooperative learning	20	30	29	79
Differentiation	17	20	30	67
Curriculum integration	21	21	20	62
Questioning & cuing	15	15	16	46
Critical thinking skills	15	15	12	42
Total amount of coded segments	190	272	319	

Table 4.2 displays the totals of all the occurrences of the entries to determine which strategies were most prevalent and as being important for each discipline. The figures indicate which themes are most crucial for teaching English and content subjects. The figures formed the basis for section two, which was to construct the questions for the questionnaire for the teachers and also for the students, so that objectives two and three could be completed.

Section Two

Objective Two

To identify the instructional methods used in content subjects in English. To complete this objective questionnaires were devised for the teachers from the three schools. The questions in the questionnaires were devised from the themes from objective one so that the use of their instructional methods could be measured. The questions for objective two were devised into similar themes from objective one. In support of this, the questions for the interviews were also devised from objective one.

Demographic data of the teachers. In total 140 questionnaires were initially sent to the teachers. Therefore 140 questionnaires were considered to be legitimate for this research. Of these 128 were returned. Saint Joseph Bangna School, responded with 28, Saint Joseph Convent School responded with 52 and Saint Francis Xavier School responded with 48. Demographic data demonstrates gender, and the length of time that each respondent had worked at each school. The data in table 4.3 shows that the population of teachers was 53 females and 75 males.

Table 4.3 *The personal data information for the teachers in the study.*

Schools	Males	Females
Saint Joseph Bangna	15	13
Saint Joseph Convent	37	15
Saint Francis Xavier	23	25
Totals	75	53

Table 4.4 *The length of stay for the teachers at each school in the study*.

Schools	Length of stay at school	
Saint Joseph Bangna	less than 1 year	15
	2 - 3 years	4
	4 - 5 years	5
	6 + years	4
Saint Joseph Convent	less than 1 year	45
	2 - 3 years	6
	4 - 5 years	0
	6 + years	1
Saint Francis Xavier	less than 1 year	33
	2 - 3 years	10
	4 - 5 years	2
	6 + years	3

The data from the interviews. All the questions for the interviews originated from the content analysis from objective one. Since no questionnaires were given to the administrators the researcher wanted to find out how leadership played a role in the teaching of language and or content since the content analysis was based on teaching content and language. Teachers' questions were designed to find out any kind of teaching practices not covered in the questionnaires but also to fill in any data not stated in the questionnaires. Three program leaders & three teachers participated in the interviews. The duration for each interview lasted between 20-45 minutes. The researcher travelled to the locations where the respondents worked so that the interviews took place in their own surroundings.

Table 4.5 *A summary of the interview data for administrators and teachers.*

Communications	
Administration questions	**Teacher questions**
Do you have meetings with your foreign teachers which focuses on collaboration or cooperation between them and you? What are the main subjects of these meetings and do they ever cover any instructional advice about what teachers do in the classroom? To what extent do you encourage collaboration between teachers, utilising students background knowledge related to content literacy vocabulary, and grammar?	Do you collaborate with any other teacher to help you with your class in any way?
Administration responses	**Teachers responses**
Meetings are held at the beginning of each semester, between all teachers' and administration. Lesson plans and school activities are the main topics. Thereafter it's up to the teachers to have meetings, as school administration does not organize any further teacher meetings.	Meetings are held at the beginning of the semester to discuss lesson plans and any of the school activities that the Thai teachers and administration have planned. Teachers don't have many meetings after that and especially when the semester starts, as there is little time.
Lesson planning & Preparation	
Administration questions	**Teacher questions**
Do you require that foreign teachers provide lesson plans prior to teaching? Can you describe the preparation times and or facilities that teachers have to plan and develop their lessons?	Do you produce lesson plans and are they approved by anyone else? And in the lesson plans do you write or plan any subject and language objectives? Do you ever relate lessons based on student's background knowledge? Is any lesson connected to the one before how is this done?
Administration responses	**Teachers responses**
All teachers are required to produce lesson plans. Teachers have office time before the semester starts to plan any lessons. When the semester starts they also have time in between classes to plan their lessons.	All teachers produce lesson plans and administration approves them prior to the start of each semester. Lesson plans are basic only content as there is little time to prepare plans with any more than that. Besides these lesson plans have little relation to what is actually done in the classroom.

Table 4.5 *Summary of the interview data for administrators & teachers cont.*

Teaching practices	
Administration questions	**Teacher questions**
How much emphasis do you place on differentiation as a classroom teaching method?	Do you ever vary the kinds of instructional methods or activities in the class to cover for the different kinds of students with varying levels of abilities in your class? What kinds of exercises do you give the students in class and do you ever use vocabulary, grammar, reading comprehension. What is your main teaching styles, are they mostly lecturing where you stand and tell or do you like the students to get more involved?
Administration responses	**Teachers responses**
Any practices that are related to teaching, is up to the decision of the individual teacher. The extent to what, how and when they differentiate all depends on the teachers decision which also depends of what they are teaching.	Not much variation for content subjects. There is no training available for this so its not considered a priority. Furthermore, big classes are difficult to manage so differentiation is very difficult. Besides many teachers have no background knowledge in this skill. Kinds of exercises are mostly on the whiteboard. Vocabulary, grammar and reading is done by the students themselves in their own time, no time in class to do this. Lecturing styles are mostly lecturing in nature.
Teacher development	
Administration questions	**Teacher questions**
What teacher development plans do you offer for teachers? How do you monitor the academic performance of your English program foreign teachers for the content subjects?	What kinds of teacher development have you completed?
Administration responses	**Teacher responses**
For the three schools they relay heavily on the traditional seminar approach to teacher development. Teacher experts are brought in from outside agencies to carry out in-house training for the teachers.	From the teachers perspective seminars are the main item used to develop their teaching skills. Some teachers go to seminars that are outside of their own school, but the majority of them are within their school.

Table 4.5 *Summary of the interview data for administrators & teachers cont.*

Teaching Materials & Technology	
Administration questions	**Teacher questions**
What teaching materials does the school provide for content teachers?	Do you use any technology when teaching? Do you ever develop or adapt any materials for your classes? For example do you ever re-write any materials to make them easier for students to understand?
Administration responses	**Teacher responses**
The main items are the provision of overhead projectors and sound equipment often build in to the classrooms. Other than this teachers have to design and make their own as and when they need them.	The main items are the overhead projectors fitted in to many classes. Teachers also make their own slide shows but it takes up too much time between classes they are also preparing for other classes.
Critical thinking skills	
Administration questions	**Teacher questions**
Generally speaking, can you explain the scale of critical thinking that is utilised in the classroom as a teaching strategy?	How much critical thinking do you do or are you only concerned with the main points of the subject?
Administration responses	**Teacher responses**
It's difficult to teach this in class. So it is up to the teachers to decide what critical thinking they think is important. More time is needed for teachers to plan this and more training is also needed to enhance it.	Teachers require training for critical thinking because they lack basic skills needed to teach it. Schedules also don't allow teachers to communicate enough so that they could share, any content & language knowledge.
Integration of Language and Content	
Administration questions	**Teacher questions**
Do you encourage integrated content and language or group learning? And does the program have any formal policy of curriculum integration?	Do you ever use any CLIL ideas like integrating any language items in your class like vocabulary, grammar, critical thinking, reading or writing related to your subject?
Administration responses	**Teacher responses**
It's the responsibility of the teachers to integrate anything they see as important. But lack the training for it. Some integration has been implemented but maintaining it, wasn't successful as it took up too much time to implement.	Teachers never heard of CLIL but some integration is done but integrating language & content means more planning & there is no time for that. The sheer amount of vocabulary is often too much to fit in & this again poses problems that content teachers cannot fix, besides too much time on vocabulary means less time on content.

Summary table 4.5. Table 4.5 is a summary of the interviews on 3 English program leaders and 3 content teachers. The researcher devised the interview questions based on the themes from the content analysis as the questionnaires were being used to back up what the questionnaires stated. The questions were an even mixture of structured and semi structured statements that tried to fill in any gaps left by the questionnaires from the teachers. The researcher travelled to each of the locations to interview each interviewee and took notes during each meeting. The interviews for the teachers', were conducted, by the same structured and semi structured manner with 1 math teacher, 1 science teacher and 1 social studies teacher.

Data tables. Table 4.6 displays the data for the teacher in tabular form. For this objective there were 64 questions. It was necessary to have this many questions because of the eclectic nature of the variables which comprise content and language teaching in respect to the 8 themes from objective 1 and also to how teachers generally prepare and plan for their classes. The figures all relate to each question set out in the teacher's questionnaire. The subjects are math, science and social studies. The figures are further broken down into mean and then into standard deviation. The data is further subject to analysis by using table 3.6 that gives an indication to how the scores are interpreted.

Table 4.6 *Teacher's results for the instructional methods used in content subjects.*

Statements	Math		Science		Social studies	
	Mean	SD	Mean	SD	Mean	SD
Communications & cooperation (vocabulary)						
1. English teachers help to teach vocabulary for my subject.	*1.70*	.71	2.37	.78	2.22	.44
2. I have meetings with English teachers to teach vocabulary.	2.46	1.04	2.17	.72	2.22	.44
3. I review the vocabulary for my subject in class.	2.37	.99	2.32	.98	*1.89*	.92
4. I pre-teach vocabulary for my subject.	*2.06*	1.03	2.25	.88	2.0	1.0
5. I give vocabulary assignments for my subject.	2.28	1.01	*2.11*	.90	*1.78*	.66
6. I vary vocabulary exercises in my class.	*2.06*	.97	*2.02*	.85	2.0	1.0
7. I instruct students to use a dictionary for new words.	2.44	1.09	*2.11*	.95	*1.67*	.70
Total average:	2.19	0.97	2.19	0.86	1.96	0.73
Communications & cooperation (grammar)						
8. English teachers help to teach grammar for my subject.	*1.93*	.77	2.57	.91	*1.56*	.72
9. I have meetings with English teachers to teach grammar.	2.50	1.07	2.22	.89	*1.56*	.88
10. I review the grammar for my subject in class.	*1.76*	.79	*2.06*	.74	*1.56*	.72
11. I pre-teach grammar for my subject in class.	*1.93*	.86	*2.05*	.89	*1.78*	.83
12. I give grammar assignments for my subject.	2.44	1.17	*2.00*	.81	2.22	.44
13. I vary the grammar exercises in my class.	*1.76*	.72	*2.17*	.78	2.22	1.09
14. I instruct students to use grammar books for my subject.	2.54	1.20	2.46	1.6	2.44	1.13
Total average	2.12	0.94	2.21	0.94	1.90	0.83
Communications & cooperation (reading)						
15. English teachers help to teach reading skills for my subject.	*2.04*	.80	2.42	.93	2.56	1.13
16. I have meetings with English teachers to teach reading.	2.39	1.12	2.25	.95	*2.33*	1.22
17. I re-write texts to make them easier for students to read.	2.41	1.19	2.46	.93	*2.11*	1.05
18. I pre-teach reading skills for my subject.	2.33	1.13	2.38	.94	*1.67*	.866
19. I give reading assignments for my subject.	*1.83*	.84	2.00	.89	2.44	1.33
20. I vary the reading activities in my class.	*1.85*	.87	2.40	1.01	*2.00*	1.00
21. My classes all read together in my subject.	*1.98*	.85	*2.05*	.89	2.22	.83
22. Students read in pairs in my class.	2.43	1.07	*2.23*	1.17	2.33	.86
Total average	2.15	0.98	2.27	0.96	2.20	1.03

Table 4.6 *Teacher's results for the instructional methods used in content subjects (cont).*

Statements	Math		Science		Social studies	
	Mean	SD	Mean	SD	Mean	SD
Communications & cooperation (writing)						
23. English teachers help to teach writing skills for my subject.	2.02	.92	2.51	1.14	*1.56*	.88
24. I have meetings with English teachers to teach writing.	2.43	1.20	2.40	1.07	*1.56*	.88
25. I pre-teach writing skills for my subject.	*1.89*	.79	2.31	1.31	2.33	1.00
26. I give writing assignments for my subject.	2.00	.89	*1.88*	.87	2.44	1.01
27. I vary the kinds of writing exercises for my class.	*1.98*	.18	*2.17*	1.0	2.44	1.01
Total average	2.06	0.79	2.25	1.07	2.06	0.95
Classroom teaching practices						
28. I use paired activities in the class.	2.43	1.05	2.38	1.0	2.56	1.01
29. I use listening activities in my class.	2.46	1.05	2.49	1.07	*2.11*	.92
30. Students do presentations in my class.	2.44	1.02	*2.02*	1.0	*2.22*	1.09
31. I use group work activities in the class.	2.39	1.17	2.26	1.0	*2.22*	.83
32. I use task-based learning in my subject.	2.41	1.20	*2.0*	.96	*2.33*	1.41
33. I use real objects in the class when I teach.	2.41	1.25	*1.98*	.87	*2.11*	1.16
34. I teach students study ideas for my subject.	*2.22*	1.17	2.40	1.27	2.44	1.23
35. My students mostly sit and listen to me in class.	*2.15*	1.17	*1.88*	.92	*1.89*	.92
36. I use one to one teaching to help students' progress.	2.44	1.16	2.43	1.18	2.56	1.50
37. I use student centered learning activities in my class.	2.48	1.39	2.35	1.30	2.44	1.23
38. I teach with flash cards to make understanding easier.	*2.09*	1.27	2.29	1.08	*2.33*	1.11
39. I use questions as part of my general teaching strategy.	2.35	1.41	2.45	1.22	2.78	1.48
40. I use different teaching methods to suit different students.	2.35	1.34	*1.69*	.90	2.44	1.42
Total average	2.35	1.20	2.20	1.05	2.34	1.17
Materials use						
41. I use videos to teach in class.	2.46	1.17	*2.14*	1.26	*2.11*	1.16
42. I use computers to teach in class.	*2.24*	1.28	2.46	1.25	2.44	1.50
43. I use hand held devices to teach in class.	2.39	1.18	2.43	1.22	2.22	1.20
44. I use power point for teaching my subject.	2.48	1.09	2.48	1.45	*2.11*	1.36
45. I vary the kinds of technology I use in this class.	2.52	1.28	2.43	1.27	*1.89*	1.36
46. I use sound equipment for listening and speaking in class.	*2.30*	1.76	*2.17*	1.67	2.44	1.33
Total average	2.39	1.29	2.35	1.35	2.20	1.31

Table 4.6 *Teacher's results for the instructional methods used in content subjects (cont).*

Statements	Math		Science		Social studies	
	Mean	SD	Mean	SD	Mean	SD
Critical thinking						
47. I use problem-solving tasks in my class.	2.31	1.38	2.34	1.32	2.33	1.22
48. I teach critical thinking as part of my subject.	*2.28*	1.26	*2.02*	1.17	2.22	.97
49. I use questions as part of my teaching strategy.	2.43	1.22	*2.20*	1.35	2.56	1.33
50. I vary the kinds of questions during my class.	2.31	1.38	2.46	1.47	2.56	1.42
51. I make lesson plans incorporating critical thinking.	*2.19*	1.23	*2.11*	1.07	*1.67*	.86
52. I vary the kinds of critical thinking lessons in my class.	2.37	1.26	2.37	1.25	*1.44*	.72
Total average	2.31	1.28	2.25	1.27	2.13	1.08
Planning & Preparation						
53. I write lesson plans for my subject.	2.51	1.48	*2.08*	1.45	2.56	1.33
54. I have teacher training for my subject.	2.30	1.50	2.34	1.35	*1.56*	.88
55. I pre-teach important theories to the class.	2.31	1.25	2.40	1.17	2.44	1.23
56. I write subject objectives in my lesson plans.	1.96	1.14	2.31	1.15	*2.00*	1.32
57. I use pre and post tests as part of my planning.	2.46	1.34	*2.17*	1.11	2.33	.86
58. I write language objectives in my lesson plans.	*1.57*	.76	2.43	1.15	2.56	1.23
59. I observe other teachers to improve my teaching.	*1.93*	.887	2.23	1.05	*2.11*	.78
60. I vary the kinds of teaching methods in my class.	2.44	1.36	*2.05*	.95	2.22	1.20
61. I use known teaching models for my subject.	2.43	1.23	2.42	1.13	2.44	1.01
62. I adapt teaching materials to suit my students' levels.	2.30	1.17	*1.75*	.86	*1.78*	.97
63. My lesson plans are part of a series of connected lessons.	2.31	1.30	*2.06*	1.01	*2.00*	1.11
64. I prepare lessons built on student's background knowledge.	2.30	1.31	2.29	1.12	2.67	1.32
Total average	2.23	1.22	2.21	1.12	2.22	1.10

Table interpretation. Table 4.6 shows the raw data results for the teacher's questionnaire and show mean and standard deviation. The figures that are italicized are results that are lower than the average and were considered a priority for development. The figures that are not italicized are above average and indicate their best practice and should be maintained.

Table 4.7 *The interpretation of data for teachers.*

Teachers	Math		Science		Social Studies	
	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Academic language	2.28	Very rare	2.32	Very rare	2.0	Very rare
Communication strategies	2.46	Very rare	2.57	Sometimes	2.56	Sometimes
Curriculum integration	2.54	Very rare	2.46	Very rare	2.22	Very rare
Materials	2.39	Very rare	2.35	Very rare	2.20	Very rare
Critical thinking skills	2.31	Very rare	2.25	Very rare	2.13	Very rare
Differentiation	2.35	Very rare	2.20	Very rare	2.34	Very rare
Questioning and cuing	2.43	Very rare	2.20	Very rare	2.56	Sometimes
Cooperative learning	1.98	Very rare	2.05	Very rare	2.22	Very rare

Table interpretation. Table 4.7 shows the interpretation of the data in the groups that correspond to the themes from the content analysis and which started to form the model for this study. These eight themes form the main data for this study for the teaching methods of teachers. They also give a high indication for what learning methods students should be using for section three and the scores of what they actually do.

Section Three

Objective Three

To identify how students learn content subjects in English. To complete this objective, questionnaires were devised from the themes of the content analysis found in objective one. The questions were also written in such a manner so that they were easy to read because of the ages of the students (junior to middle high school).

Demographic data. In total 1,523 questionnaires were initially sent to the three schools that were identified as having English programs. Therefore this figure was considered to be the legitimate number for this research survey. A total of 471 were returned and there were no unusable surveys. Saint Joseph Bangna School responded with 51, Saint Joseph Convent School responded with 311 and Saint Francis Xavier School responded with 109. From these responses the sample of 306 students was sampled for this study.

Analysis of the demographic data obtained demonstrates gender, age, grade and the length of time that each respondent had attended the school. The data showed that the population of students was 278 girls and 28 boys between the ages of twelve and fifteen inclusive. Table 4.8 shows the demographic data.

Table 4.8 *The personal data information for the students in the study.*

Schools	Class, age and gender					
	M1 age 12-13		M1 age 13-14		M1 age 14-15	
	girls	boys	girls	boys	girls	boys
Saint Joseph Bangna	12	0	16	0	13	0
Saint Joseph Convent	58	0	65	0	68	0
Saint Francis Xavier	20	14	4	4	22	10
Totals	104		89		113	

The level of the students ranged from junior high school level stated as between twelve-thirteen years old through to thirteen-fourteen years old and the upper level of junior high school level between fourteen-fifteen years old. Only one school had the facility to admit boys who were outnumbered considerably. The study also showed that all three schools had a good record of retaining students because most students stated that they had stayed more than six years. Only ten students that stated they had studied there for less than one year.

Table 4.9 *The length of stay for students at each school in the study.*

Schools	Length of stay at school	
Saint Joseph Bangna	less than 1 year	0
	1-3 years	4
	4-6 years	5
	6 + years	32
Saint Joseph Convent	less than 1 year	0
	1-3 years	61
	4-6 years	15
	6 + years	115
Saint Francis Xavier	less than 1 year	10
	1-3 years	4
	4-6 years	17
	6 + years	43

Table 4.10 *Students results of the methods they use in content subjects*.

Statements	Math		Science		Social studies	
	mean	SD	Mean	SD	Mean	SD
Academic language curriculum integration & differentiation						
1. I learn new words.	*2.34*	1.26	2.24	1.52	*2.42*	1.40
17. I use a dictionary.	2.49	*1.24*	*2.08*	*1.13*	2.52	*1.29*
Total average	2.41	1.25	2.16	1.32	2.47	1.34
2. I learn grammar.	2.45	1.12	2.42	1.19	2.47	1.22
Total average	2.45	1.12	2.42	1.19	2.47	1.22
4. My class reads together.	2.48	*1.14*	2.48	*1.14*	2.47	*1.14*
5. I read with a friend.	*2.38*	1.22	*2.46*	*1.25*	*2.40*	1.18
14. Books are easy to understand.	2.46	1.32	2.47	1.40	*2.38*	1.22
Total average	2.44	1.22	2.47	1.26	2.41	1.18
6. I do writing exercises.	2.43	1.56	2.48	1.47	2.47	1.29
Total average	2.43	1.56	2.48	1.47	2.47	1.29
3. I do listening activities.	2.46	1.34	2.49	1.36	*2.43*	1.34
7. I learn new ways to study.	*2.30*	1.33	*2.38*	*1.30*	*2.40*	*1.22*
Cooperative learning strategies						
12. I learn in groups.	2.45	*1.19*	2.61	*1.24*	2.50	1.34
18. I do different things in class.	2.40	*1.18*	*2.43*	1.56	2.48	1.47
Total average	2.44	1.18	2.44	1.35	2.50	1.40
Questioning & cuing strategies						
20. I get different kinds of questions.	*2.36*	1.28	*2.30*	*1.27*	2.47	*1.22*
Total average	2.36	1.28	2.30	1.27	2.47	1.22
Materials						
10. I use pictures to learn.	*2.40*	1.26	2.45	1.38	*2.46*	*1.32*
11. I learn by watching videos.	2.47	*1.14*	*2.38*	*1.22*	*2.46*	*1.25*
13. I use diagrams to learn.	*2.38*	1.30	*2.40*	*1.22*	*2.49*	1.41
19. I use computers in class.	2.43	1.36	2.54	1.34	2.60	1.35
Total average	2.42	1.26	2.44	1.29	2.50	1.33
Project, enquiry, problem based learning						
8. I learn how to solve problems.	2.49	1.41	2.34	1.28	2.49	1.29
Total average	2.49	1.41	2.34	1.28	2.49	1.29
Communication strategies						
9. I give presentations.	*2.35*	*1.19*	*2.38*	1.20	*2.38*	*1.18*
15. I do projects.	*2.36*	*1.18*	*2.41*	1.26	2.44	1.37
16. I do experiments.	2.46	1.32	2.47	1.14	*2.38*	*1.22*
Total average	2.39	1.23	2.42	1.2	2.4	1.25

Table 4.11 *The interpretation of student's data.*

	Math		Science		Social Studies	
Students	Mean	Interpretation	Mean	Interpretation	Mean	Interpretation
Academic language	2.41	Very rare	2.16	Very rare	2.47	Very rare
Communication strategies	2.45	Very rare	2.42	Very rare	2.47	Very rare
Curriculum integration	2.44	Very rare	2.47	Very rare	2.41	Very rare
Materials	2.42	Very rare	2.44	Very rare	2.50	Very rare
Critical thinking skills	2.49	Very rare	2.34	Very rare	2.49	Very rare
Differentiation	2.39	Very rare	2.44	Very rare	2.45	Very rare
Questioning & cuing	2.36	Very rare	2.30	Very rare	2.47	Very rare
Cooperative learning	2.39	Very rare	2.42	Very rare	2.4	Very rare

Table interpretation. Table 4.11 shows a summary of the data results for the student's questionnaire. The table shows the eight constructs and also the Mean and Standard Deviation for each of them. The table demonstrates the degree of how often students receive these major constructs as part of their math, science and social studies classes in the three schools in the survey.

Section Four

Objective Four

To develop a model for content and language integrated learning. A model is a framework, and guide, which highlights the main ideas and variables from research. They include diagrams to coordinate the design and to give an understanding of the process. Models are constructed from a broad set of theories that guide researchers to a central idea based on the research. It also serves, as a vantage point for researchers where they can view phenomena under study (Mcilrath & Huitt, 2005)

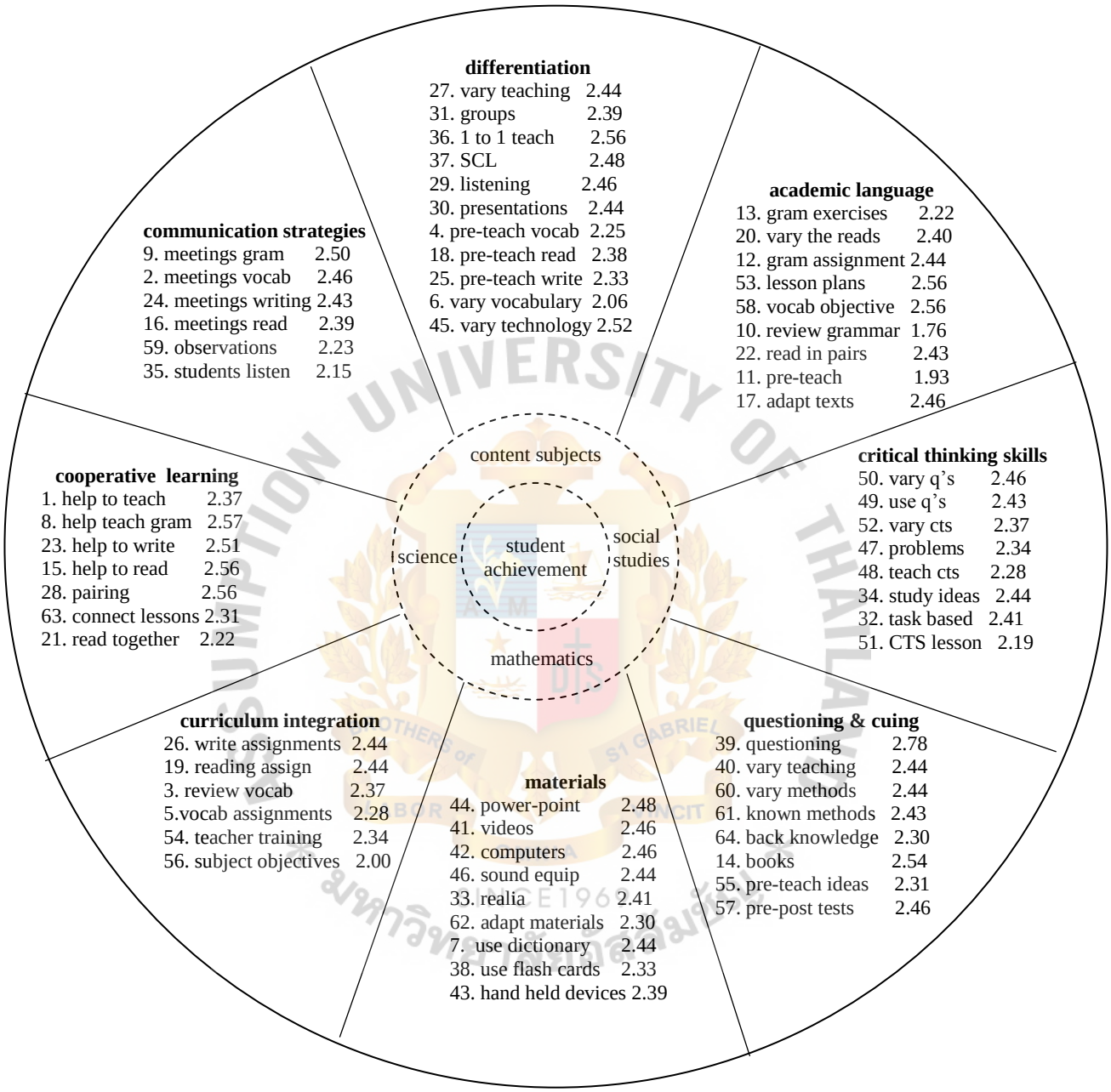


Figure 4.1 The proposed model for content and language integrated learning.

The components of the model. Figure 4.1 was constructed from the eight themes from the data and findings from research objective one. These eight themes were the most important strategies that teachers should be using or adapting when teaching math, science and social studies in English. The eight themes that formed the components also formed the basis for the questions for research objective two for the teachers and also the back up data from research objective three for the students. The figure itself was designed to highlight the weaknesses from this data provided by the teachers that related to these eight parts shown in the figures for each component. Both this data can provide a formal platform for corrections to aid the content teacher's instruction and aid their development of the methods they use or could adapt within the appropriate English programs.

Model validation by experts. To ascertain the operational viability of the proposed model it was given to the focus group of expert teachers. The validation process was carried out using face-to-face meetings and e-mail. Literature describing the model was sent to each teacher and they were invited to discuss the viability of it for the three schools. These teachers were specifically chosen because they each held a masters degree and had long service as teachers. Recommendations from the experts were all positive. One expert requested that only the names of the components be used to emphasize their importance. Another expert suggested that the model should be seen as a continuous, flow diagram where each component is connected to others. Another suggested that the model should contain the importance of encompassing transformational leadership. The researcher accepted all the proposals and updated them accordingly and a new model was finalized.

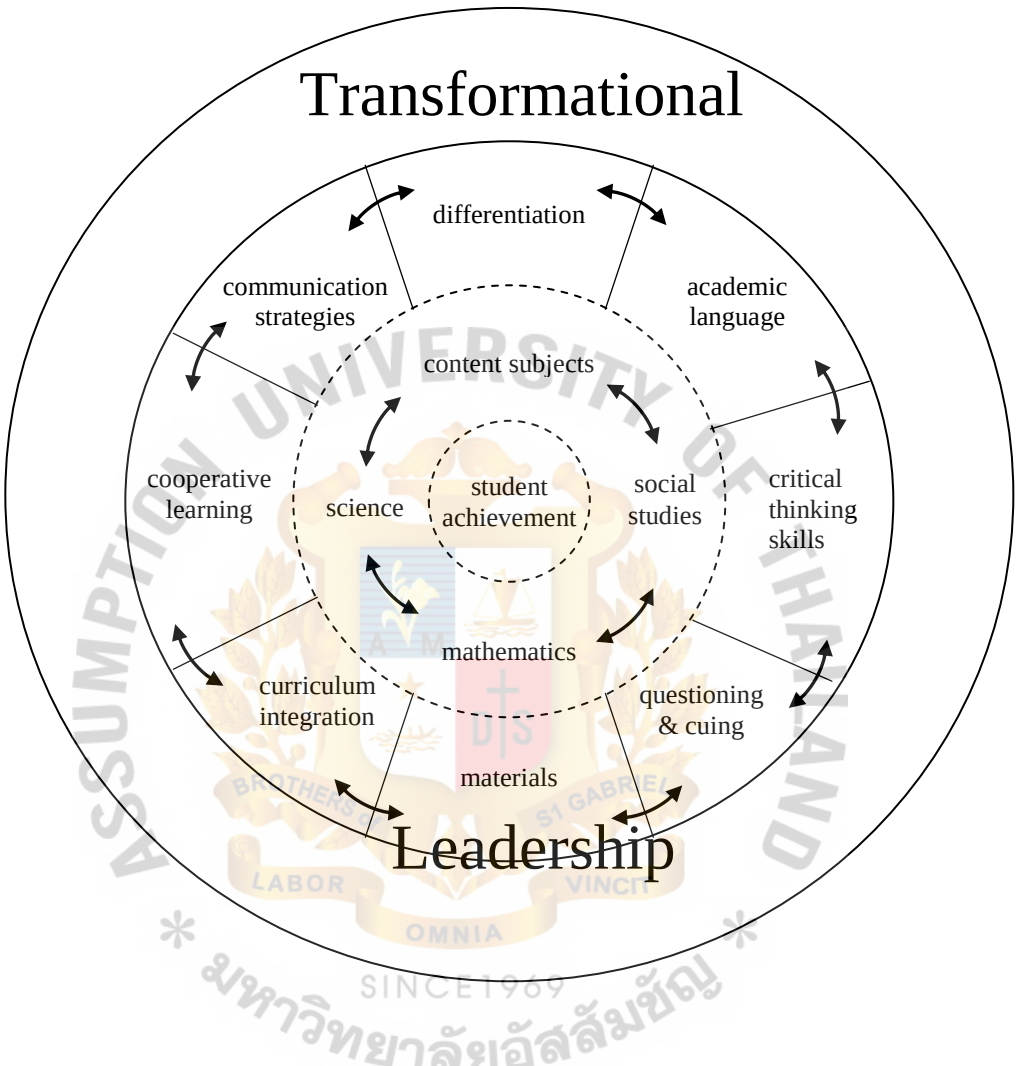


Figure 4.2 The Final model for content and language integrated learning.

The main components of the final model. The model was constructed by utilizing the elements of the content analysis and has eight components that cover major pedagogical areas of academic language, communication strategies, curriculum integration, materials, critical thinking skills, differentiation, questioning & cueing strategies, and cooperative learning strategies. The model encompasses the theory of transformational leadership. Each component is an attempt to highlight, by integrating language to develop students comprehension of content subjects in English to help solve that ever, elusive problem, that of improving teaching of content subjects in English and improving student achievement. Bandura once stated that learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them of what to do. Research has shown that modeling can be used across disciplines and in all grade and ability level classrooms (Bandura, 1986).

How to use the components of the model. The use of the components for the model and their applications is expressed in table 4.12 and also by the use of a lesson plan format and inventories used for differentiation, instructional practices and critical thinking skills contained in appendix F. Table 4.12 explains the process from initial planning the instruction and evaluation that all teachers use in the course of their work. The content teacher should be considered as the lead person in this because he/she is the one who knows which are the major language elements that should be pre-taught by the language teacher in order to prepare students for the forthcoming content.

For example; If the content text contains a lot of scientific facts, then it would be advisable for the language teacher to devise lessons based on the zero conditional. This element of language is best for this situation, because the nature of the construction of its syntax; is of specific value to stating scientific facts. But the language teacher would also need to integrate many other parts including essay writing, cloze exercises so that students build wide experience using a wide range of language that also integrates all the pre-taught vocabulary, grammar and the reading and writing elements of this particular lesson. Both the language and content teachers would also have to build in their own methods of how to differentiate their own instruction according to their own particular teaching styles.

Table 4.12 is set as an example sequence starting with the English program adopting the academic practices of integrating the curriculum. This means that language is an inherent part of all content subjects and is taught prior to them. To achieve this, content and language teachers communicate and collaborate regularly across both their subjects by constructing and updating a single lesson plan with appropriate materials, that has at its core content and language objectives that support each other and each teachers has a copy, so that each knows what the other is doing. Each teacher concentrates on using similar teaching strategies along with building academic language, using questioning and cuing, cooperative learning, project, enquiry and problem-based learning, differentiating their respective subjects using the pre-planned language with the content throughout each lesson.

Table 4.12: *The main components of the model and how they are used.*

Phase 1: Preparations & planning for teaching		Time allocation: 60%
Construct	**Who**	**Application**
Curriculum integration	school leadership	Through a process of transformational leadership the school adopts a policy where teachers from different subjects coordinate & integrate content and language instruction through cooperation. Teachers also integrate their curriculum in class with other subjects using the four skills of reading, writing, listening and speaking in a planned & coordinated manner.
Teachers communicate & collaborate to share knowledge about content and language	all teachers	This is designed to create professional learning communities between content & language teachers with a view to prepare students for the forthcoming content. Activities include: 1) Teachers meet & engage in frequent, continuous, and increasingly concrete and precise talk about teaching practice. 2) Teachers are frequently observed and provided with useful critiques of their teaching. 3) Teachers plan, design, research, evaluate, and prepare teaching materials together. 4) Teachers teach each other the practice of teaching.
Design integrated content & language lesson plan	content & language teachers	This involves communication & cooperation between content & language teachers who meet to share content & language knowledge. They develop a shared lesson plan so that each knows what the other is doing. The lesson plan has content as well as language objectives related to the appropriate teacher. The content teacher is the leader with the language teacher in a supporting role (content support).
A plan to build in academic language including reading & writing across the curriculum	language teachers	Incorporated in the lesson plan are objectives that are designed to build students background knowledge. This is achieved by pre-taught language so that they are ready for the forthcoming content subject. This includes vocabulary, grammar as well as reading and writing activities from across all of the content areas with an emphasis on the use of academic language (CLIL) strategies.
Develop instructional materials based on realia & hands on learning	content & language teachers	From the lesson plan materials are identified, designed, & modified and as much as possible based on realia. Texts are adapted / modified to suit students' grade & language levels and include graphic organizers.
Planning effective questioning & cuing strategies	content & language teachers	Using Blooms taxonomy as a basis for questions is designed to build students critical thinking skills.

Table 4.12: *The main components of the model cont.*

Phase 2: Teaching practices		Time allocation 30 %
Methodologies	**Who**	**Application**
Differentiate the content	content teachers	Differentiated instruction; for content & language, is led by students learning styles. Group students by shared interest, topic, ability, assignments.
Differentiate the language	language teachers	
Integration of content areas	content & language teachers	Language teachers continually recycle language with content knowledge using CLIL strategies. Content teachers continually recycle language items during their instruction.
Using questions & cues to activate prior knowledge	content & language teachers	Instructional approaches, to activate & builds background knowledge in vocabulary and content comprehension. So it is important for teachers to schema build before learners work with text. Both the content and language teacher and students need to be actively involved in the use of language.
Using non linguistic representations & materials	content & language teachers	Materials used frequently during instruction. These feature non-linguistic representations pictures, illustrations, art, movies, presentations, visuals including graphic organisers in class.
Cooperative learning strategies	content & language teachers	Both content and language instruction contains items from each other's subjects, and emphasis is given to group, paired or whole class activities that re-enforce each of them.
Critical thinking strategies	content & language teachers	Use open-ended tasks & projects & allow students choice to encourage students to use critical thinking & enquiry skills in which they have to communicate, collaborate, research, analyze, create and often present at the end.
Creating learning centers	math teachers	Create learning centers that place emphasis on building background knowledge. Teachers' role is to advise and ask questions & allow students to take more control in what they do and how they arrive at certain hypothesis.
Activities that relate to hands on science	science teachers	Involve learners by encouraging learning by doing. Especially the comprehension of scientific practical activities in lab & field-work using realia.
Academic vocabulary and language	social studies teachers	Emphasis on the comprehension of informational texts and the adaptations of them along with instruction on vocabulary including literacy strategies & questioning.

Table 4.12: *The main components of the model cont.*

Phase 3: Evaluation		Time allocation 10**%**
Content Evaluation	**Who**	**Application**
Formative and summative assessment	content teachers	Evaluate students' content knowledge using the pre-taught language.
Language Evaluation		
Formative and summative Assessment	language teachers	Evaluate students' use of language using the pre-taught content.

Part-time & full time content language support. Part time content support means that language support is carried out just prior to a summative test. Teachers develop a shared content and language lesson plan where the language is supporting the content. Full time content-support, means that the school has language teachers regularly teaching supporting language. Teachers meet regularly even share offices so that they are in daily contact with each other, so that formal and informal connections can be made between them so that both language and content instruction can be integrated.

Specific content language support. This relates to any form of language support, devised by the teacher for a specific piece of text and is analyzed for its contextualized language. This would normally be related to the most important vocabulary in that text. The purpose of this is to devise lessons to practice the language from that text to make the text easier for students to comprehend, therefore easier to use when communicating when answering academic questions in writing tasks or speaking when giving oral presentations about the subject.

General content language support. General content language support relates to language support that does not relate to any kind of specific piece of text, page or paragraph. Its main focus is to teach basic content literacy skills that are necessary for students to use when writing about any content related subject to broaden students academic language experiences and helps build their background knowledge and prepares them for future academic writing tasks. Teachers choose language items that are vital when comprehending content texts and are common in certain content subjects to eliminate fossilized errors and to aid students writing skills in content subjects.

Initiating content language support. Content support, can be initiated, by the school. It may, also be initiated, by a content teacher (perhaps after formative assessment). Content support, may even be initiated, by students by students writing in a teacher / student shared journal where students write about content or language they either don't understand or may want further support for.

Integrated tests. Tests could also be integrated with the simple inclusion of both content and language items in the same test. The content teacher would supply the necessary texts and the basic structure of the test including the appropriate questions, & activities they require to test the content subject. The language teacher uses the same test, so in fact, students are completing two tests at the same time. When completed the content teacher marks the appropriate content and awards points for the content answers. Then the language teacher marks the same test and awards points for the correct use of language for the same questions that the content uses.

Advanced integration. Advanced integration could be achieved through a science lesson with a math element and a social studies element combined. A good example of this is the study of populations among developing countries. The social studies teacher could include tasks that require students to explain the physical or human geography elements that relate to the causes & effects of birth and mortality rates related to a country. The math teacher could teach math theories that relate to various birth & mortality rates on graphs. The science teacher may select items that teach students why certain groups of people are prone to certain diseases that affect the health of the populations. The culmination of this is for students to produce an essay integrating the social facts, mathematical and scientific elements to explain the rise and falls of populations during a key period of time.

Chapter summary. This study explored four questions, the first related to the instructional methods used for content subjects in English. To accomplish this, a content analysis study was devised and completed on articles, books and websites. From this, eight major themes emerged namely; academic language, communication strategies, curriculum integration, materials, project enquiry and problem based learning, differentiation, questioning & cueing strategies, cooperative learning strategies. The second question related to the instructional methods that content teachers were using. Questionnaires were used as the main item of research for this for math, science and social studies, table 4.6 shows the results. Interviews were also conducted with three English program managers and three teachers from one of the schools; a math teacher, a science teacher and a social studies teacher and table 4.5 shows the summary of the transcripts for this data.

The third question related to the learning methods students use in content subjects. Again questionnaires were used as a background survey relating to how and what students used when learning in their content classes and covered the same three subjects; math, science and social studies, the results of which are contained in table 4.10. The fourth question related to bringing all of this newfound data from teachers and students together and to design a model for content language integrated learning based on the findings of the research from the previous three questions. The model was designed by the researcher using the highest numbers recorded from occurrences from the data from question 1. The model was then given to twenty expert teachers to validate it as a working model for content classes.

CHAPTER V

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

The overriding goal of this study was to develop a model for content and language integrated learning for English programs of Saint Paul de Chartres Schools. The model designed was based on the findings from both quantitative and qualitative data collection. The data was collected in sequence and three types of data collection were carried out: content analysis, surveys and interviews.

The primary intention of this model was to help solve the problems stated in chapter 2 and create awareness among school leaders and teachers who teach in English programs to spark interest in collective participation in leading change for the improvement of study. Teachers can also be leaders and start to develop a more cooperative and communicative approach to their work so that models that perpetrate best practices can start to work for them and for students to achieve more from their studies. Ultimately, it is the intention of the researcher, that this model serves as a feasible guideline that if implemented would improve student achievement.

The research was conducted in November 2015 in three steps. In step one interviews, were conducted with program managers and teachers. In step two surveys were distributed to 140 content teachers where a sample of 128 was used. At the same time surveys were distributed to 1,523 students and data was collected from a sample of 306. The surveys were hand delivered to the English program managers and they were then distributed to all of the students and teachers in the program. Step three was the final procedure of collecting the data and constructing the data analysis.

The data collection addressing the research objectives was carried out quantitatively and qualitatively. The research procedures comprised of four parts; part one was a content analysis that was carried out in response to research objective one. Part two involved the collection of qualitative data collection comprising interviews from English program leaders and teachers. Part three was a systematic and sequential data collection strategy involving data collection, combining both quantitative and qualitative methods from students and teachers. The final step in the process was the researcher devising a model for content and language integrated learning for the English programs at Saint Paul de Chartres schools in Thailand. The research was driven by four objectives namely.

1. To explore the instructional methods used in content subjects in English.
2. To identify the instructional methods used in content subjects in English.
3. To identify how students learn content subjects in English.
4. To develop a model for content and language integrated learning.

Conclusion

Research Objective One

To explore the instructional methods used in content subjects in English. The results for this objective found that there were eight major themes that content teachers should be applying as a priority in their content classes. These themes should also form the basis for the English program curriculum especially for the planning and preparation between content and language teachers because they exemplify the best practices for teaching when English is not the student's first language. These themes were instrumental in forming the basis for all of the other remaining objectives.

Research Objective Two

To identify the instructional methods used in content subjects in English. The summary for objective two concluded a number of issues related to teacher's practices. Generally it seems that teachers miss out on the opportunities to practice co-operative governance. Key components in this pursuit, is of course, the value of teamwork and effective communication. This is also reflected in the lack of exploiting best classroom practices like differentiation. Differentiation of content seems underdeveloped for all content teachers. Tomlinson, states the importance of pre-teaching language before content should be made a priority (Tomlinson, 2008). Likewise the value of project, enquiry and problem based learning strategies, although teachers are aware of this, have little time for it.

This is again highlighted by lessons that are not coordinated. Materials development, suggests that they have little time to adapt any of the written texts to suit the various levels of students. This assumes that most of the instruction is of a direct instructional nature with too much emphasis placed on the teacher as a lecturer and not enough emphasis placed on student-centered instruction.

Finally, it seems that content teachers, have, over time, grown apart and become isolated from each other. Teamwork has the potential preload students with background knowledge to help their academic skills. And considering the interview data from administration this has come about as a result of a narrow choice of instructional and cooperative strategies based on a schedule that puts them in the classroom with inefficient use of planning time.

Research Objective Three

To identify how students learn content subjects in English. Based on the summary of the findings for the students. Research determined that existing classroom practices within the schools are not supportive enough for the implementation of the best practices in their content classes and are certainly not perceived as routine. Because it seems that most students have little opportunity to prepare for their content studies through a lack of background knowledge before content study commences, and don't get in to the habit of learning through lessons that highlight the importance of differentiation, or cooperative learning practices as habit.

What should be emphasized here is a general lack of academic preparedness, which results in a lack of study skills and habits for these subjects like studying contextualized language and this is prevalent across all three subjects before or even during content classes from the wide-ranging data provided by the students. This relates to a similar conclusion that during content study it seems there is also a general lack of a supportive infrastructure for example utilizing critical thinking and differentiation, which should be treated as a priority.

Research Objective Four

To develop a model for content and language integrated learning. The model was developed, by consolidating the findings from all of the previous objectives. The data of which was then synthesized, bringing together all eight parts of it into one functional model. The model was then validated; by 20 expert teachers as a working model for the three schools in Saint Paul De Chart Schools.

Discussion

This research study was developed from the problems already stated in chapter one. It mainly surrounds the problems faced initially by students and teachers who study and teach content subjects in English programs. In particular problems related to the lack of a planning for English programs that sets integration at its core. This has led to other problems like an irregular and often confusing lesson planning strategy & system, but also the lack of formal teaching methods used by teachers. This is compelled by a lack of communication and cooperation between teachers that, if existed, would prepare students background knowledge for the very content in which they study. The principles on which this study lays are rooted in these problems in that for students to understand all the texts in a content class they must first at least have some sufficient background knowledge prior to its study.

Nation, Billmayer and Barton stated that any teaching system that lacks direction often leads teachers to teach with no purpose and are at a loss as to what is really important in content studies. Teaching content when the students are not pre-loaded with any background knowledge does them little service. To this, teaching becomes unfocused and lacks direction which, if not checked, often falls back on a lecturing style with less & less regard for student participation. This study and its model addressed this issue, head on and suggested that teachers first need to recognize their own weaknesses and that of the program, then commit themselves to a certain amount of self-reflection and then development especially in the areas of differentiation and critical thinking skills (Nation 2005, Billmayer and Barton 2002).

As for teaching materials, Tomlinson suggested a certain amount of needs analysis should be conducted during any planning stage, this allows the opportunity for teachers to cooperate and communicate; two theories that are vital for an integrated curriculum and are much-needed practices in these English programs. This allows for plans to be made for teaching any background knowledge prior to content study. Some mention should also be given to consider the problems faced by teachers who teach content subjects in finding adequate training for differentiation and also critical thinking skills, as well as grade appropriate materials for those lessons that require instructional aids (Tomlinson, 2008).

As the findings of the research may indicate and as Tomlinson in her studies of differentiation of content subjects suggest: there are difficulties faced by teachers in finding adequate training for differentiation and critical thinking too for that matter. Differentiating the instruction can be a daunting prospect for many teachers but once they see the benefit of it for themselves and their students then self-motivation may drive them to continue. The researcher of this study is making a strong association with this view and the findings clearly show that this was certainly worthy of research, especially when it is considered a highly important part of the English program classroom, as an aid to improving a vital part of students and teachers ongoing academic development (Tomlinson, 2008). What should also not be overlooked when deciding a plan for teachers to develop some kind of differentiation is the work of Howard Gardner and his multiple intelligences theory. This is rooted in the fact that not all students are the same and not all students learn at the same pace either (Diamond, 2011).

In relation to the contribution this study makes to new knowledge, the study found that other well-known researchers have highlighted the importance of CLIL (e.g. Marsh 1994, Marsh, Jesús, and Martín 2010, Coyle 2001, and Marzano 2004). And they have also provided a number of important examples, especially successful mature programs in Canada, and Spain. It devotes scant attention to exactly how CLIL programs can be started, & the delivery of an actual model for English programs in Thailand has not been sufficiently specified. Thus, the attention to the growth & development of English programs in Thailand has not been recognized, examined or attempted fully.

This research has distinguished between what English programs should be doing through content analysis, and what they are doing, through questionnaires and interviews. This relationship is conceptually intriguing because of the importance and scale of this past research and what schools can do in order to implement such a valuable program. The model bridges these two important domains as it seeks to fill the gap between what has been offered before in research and what is being offered now. This study offers for the first time, a working model designed for schools that they can apply to their already established curriculums and providing they are flexible, it can be molded to suit their own working academic diet so that their English programs can start to develop and mature.

This research provides additional contributions to CLIL programs in three further areas. Firstly by advancing the general understanding of the process by which factors associated with its implementation can lead to goal fulfillment and,

subsequently, impact teacher development. This is related to student achievement through a greater understanding of the need for EFL students to receive language support for content studies, and why this alone should motivate teachers' to self-develop, to give it, so that students begin to receive benefit from committed academic investment in time and effort.

Secondly, is that this research and the model it has produced introduces for the first time the term "content support" and the ease in which it can be implemented; either part-time, which creates a flexible approach and makes it easier to implement among young and inexperienced teachers and is entirely possible to implement within an English program system and one in which has not been identified in any previous research. Furthermore if the experiences of part-time content support are elicited as a positive aid to understanding complex subjects where experience is necessary, this has exciting potential for academic development, as it has the potential to more likely transfer to full-time content support in the future.

Thirdly this research proposes reconciliation by arguing that teaching will be enhanced when teachers work together and support each other. It also has the potential to show that teachers as planners and producers of content knowledge for have the potential to perpetrate better quality knowledge if they work as part of a team where language teachers are pivotal to preparing students for content study. The model provides fresh insights into the importance of strong relationships between administration and between teachers that is an area of inquiry that has been relatively under-studied in the academic literature on English programs in Thailand.

Recommendations

Content subjects are important subjects in any school program and are the subjects in which all students' academic skills are judged. They also form an academic infrastructure for future studies at higher levels. So therefore students need to know what best practices are needed when studying the complex interaction of content and language skills together. All the skills that students' need should be related to the best teaching practices and are correlated to their success in the classroom (Sedita, 2005).

Given these facts it is hugely important that administration and teachers consider that linguistic features are high on the agenda in the school curriculum, and also to utilize communicative practices in the class too. It's also important to adapt materials and to design new ones to aid any differentiation in the class. All this needs is the self confidence and the courage to change, to allow teachers the time to plan and prepare better thought out lesson plans that integrate language and content together to make learning more natural and in line with common sense (Omoto and Nyongesta, 2013).

This study set out to devise a model for content and language integrated learning for English programs at Saint Paul de Chartres schools in Thailand. The findings from the study revealed that much of the best practices that should be implemented in an English program are at best yet to be common practice. However based, on the findings of the study and the conclusions drawn above, the following recommendations are made:

Recommendations for Teachers

A basic fundamental shift in the style of curriculum used for English programs. This would mean concrete measures to devise a curriculum that is based on content subjects, integrating content studies with the necessary language items needed to understand them.

Teachers approach to how and what they plan from this curriculum would also mean efforts made so that content and language teachers learn to communicate and collaborate together as a priority more to share the academic content of both their disciplines and to start to work together as a team.

Provide teachers with sufficient time to plan lessons. By participating in more collaborative efforts to undertake lessons that are based on shared objectives that relate to content, language, differentiation and critical thinking skills using specific content as a source. A system where lessons accommodate students differences and deal with the language barriers are more desirable in a content rich curriculum (Omoto and Nyongesta, 2013).

That all teachers be encouraged to undergo more formal teacher-development programs that concentrate on differentiating and integrating their subjects together as a priority. This is so that all teachers can utilize their collective efforts so that students benefit from the opportunities of differentiated instruction to build background knowledge, and to develop their critical thinking skills at the same time.

All the eight constructs and skills can be implemented in an English program. They were initially, identified from the content analysis study, recorded, and surveys completed to form data, and finally validated by twenty expert teachers. Furthermore this model serves as a basis to tease out these constructs that are already present within the academic compounds of the school. Because the model does not require any new technology, or any new addition to any part of the school infrastructure that is not already there, in its administrative and teaching forms. It only needs a development plan, and a shift in thinking, to learn to recognize where these parts are, and put together more efficiently, thereafter teachers teach smarter and students learn easier.

Recommendations for Students

Students could consider using more cooperative practices as routine activities with regards to learning in class. They could also adopt more participatory styles of learning especially when they encounter new language theories in a content class. And when the level of work seems to be difficult they should ask teachers to clarify language points and ask for them to pre-teach this as an aid to building background knowledge instead of it being handed to them in pages of text with no preparation.

Students could also consider practicing more open communicative practices with teachers like asking more questions and expressing their ideas, instead of just having to read the text for a specific piece of content. This way more learning on how to cope with content texts may seem less daunting.

Recommendations for Further Research

That more research into methods of integrating language skills with content in content classes, be undertaken. In-particular attention could be given to research into methods of teaching vocabulary and grammar as one teaching method may not be suitable for all levels in a program.

English programs may also benefit from research in to which particular critical instruction methods are best applied to a particular area of study. This should be a joint effort between all teachers who teach a particular subject and shared equally between them. This encourages a whole train of good practices, as teachers become instructional leaders, taking the initiative and at the same time demonstrating governance, cooperation and teamwork among themselves using classroom research.

Further research could also be done into the more academic areas of curriculum integration. Coyle and Green (2000:163) proposed models that highlight the basis for CLIL. In particular the extent to how much integration is required so that students get the maximum from the combined efforts of language and content teaching. In combination to this, further-efforts could also be made to discover how much of the curriculum could be integrated together drawn from that of the priority subjects of math, science and social studies, again to improve grades (Coyle and Green, 2000).

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APPENDICIES

APPENDIX A

The list of articles, books and websites used for the content analysis.

The list of articles and books used in the content analysis.

1	Content-based Instruction in the EFL Literature Curriculum by Hui-fang Shang I-Shou University Taiwan (2006).
2	NAVES' grid of content-based instruction (USA) (Content and Language Integrated Classroom (2000).
3	Writing and Using Content and Language Objectives A Few Items of Review by Vogt & Short (2004).
4	The Key to Effective Content Area Instruction for English Learners by: Colarado Jennifer Himmel (2012).
5	Content-Based Instruction in the Foreign Language Classroom: A Discourse Perspective by Silvia Pessoa Carnegie University (2009).
6	Studies in Second Language Learning and Teaching Adam Mickiewicz University, by Darío Luis Banegas (2001).
7	A Description of Prototype Models For Content-Based Language Instruction Universidad de Murcia by María Dueñas (2002).
8	Implementing Cognitive Academic Language Learning Approach George Washington University by Anna Chamot (2009).
9	Teacher's Notes Roots: Geography by Keith Kelly (2010).
10	Standards-and Content-Based Instruction: Transforming Language Education in Primary & Secondary Dorit Kaufman (2010).
11	Content and Language Integrated Learning A European Overview by Steven Darn (2005).
12	Improving Cognitive/Academic Language Proficiency of six the grade students Masters Thesis Education Margaret crook (2005).
13	A Six-T's Approach to Content-Based Instruction Fredricka L. Stoller & William Grabe (2007).
14	Maren Aukerman Rethinking the conversational / academic language proficiency distinction in early literacy instruction (2007).
15	Teaching History through English a CLIL approach Cambridge English (2008).
16	Content and Language Integrated Learning at School in Europe (2006).
17	Vienna English Working Papers Current Research on CLIL 2 (2007).
18	Content &Language Integrated Learning: The BBC and British Council (2006).
19	Teaching through a foreign language. A guide for teachers and schools to using foreign languages in content teaching Gisella Langé (2001).
20	Integrating Language And Content Instruction: Strategies And Techniques. Deborah J. Short (2004).
21	Teaching Geography Through English A CLIL approach Content and Language Integrated Learning: Cambridge English (2008).
22	Content-based ESL instruction and curriculum by Clara Brown (2007).
23	Literature Facilitates Content-Based Instruction by Gail August, Hostos Community College, City University of New York (2004).

24 Making Social Studies Meaningful for ELL Students by Michelle Yvonne Szpara Iftikhar Ahmad Long Island University (2008).

25 Language immersion and content-based language learning, what's the difference? By Josef Messerklinger, Asia University (2009).

26 Content-Based Instruction, Cooperative Learning and CALP Instruction by Nicole Troncale, Columbia University (2002).

27 Content-based Instruction in the Teaching of English as a Foreign Language by T. Iakavos (2011).

28 Content Based ESL Curriculum Academic Language Proficiency by Clara Lee Brown (2004).

29 Meeting the Challenge of Content Instruction by Judith O' Loughlin, Judie Haynes (2009).

30 The Theory Behind Content-Based Instruction by Thomas Sticht (2007).

31 The Impact of Content-Based Language Instruction on EFL Students' Reading Performance Ya-Ling Tsai (2010).

32 Angel Martinez 7 CEIP Mara Rodriguez, Madrid, Spain (2006).

33 Task-Based Language Teaching / Learning: Rebecca Oxford (2006).

34 Teaching writing of scientific abstracts in English P. Mungra (2010).

35 Teaching Knowledge Test Content & Language Integrated Learning (CLIL) (2009).

36 Explaining BICS and CALP Basic Interpersonal Communication Skills by Judie Haynes (2007).

37 CLIL – The question of assessment by Richard Kiely (2012).

38 CLIL & Foreign Language Learning by Yolanda Ruiz de Zarobe (2012).

39 Content Based Instruction in EFL Contexts by Stephen Davies (2003).

40 Content Based Instruction & ESL Students Washington University by Judith Jameson, (2009).

41 A framework for the professional development of CLIL David Marsh, Peter Mehisto, Dieter Wolff, María Jesús Frigols Martín (2008).

42 Hilda Taba's contribution to Social Studies by Jack Fraenkil (2005).

43 Content-Based Instruction Needs and Challenges in Diversified Literacy Content Tengku Nor Rizan Tengku Mohd Maasum, Nooreiny Maarof, Effandi Zakaria (2012).

44 Content and Language Integrated Learning: A Blended Model in Higher Education Giovanna Carloni, (2005).

45 What Content-Area Teachers Should Know About Adolescent Literacy S. Baxter (2011).

46 Content-Based Second Language Instruction: What is it? By Donna Brinton (1989).

47 Content-Based Instruction in Language Learning The Practice of Learning Theories CBI. Unknown author & year.

48 Building Academic Background Knowledge by Marzano (2005).

49 Every Day Successes: Powerful Integration of Social Studies Content and English-Language Arts Sherry Field, Michelle Bauml (2011).
50 Integrated Skills in the ESL/EFL Classroom Rebecca Oxford (2001).
51 Effective Vocabulary Instruction by Allison Williams (2005).
52 Vocabulary Ideas Compiled by Deb Smith (2008).
53 Effective Vocabulary Instruction. By Reading first (2009).
54 Unknown vocabulary density and Reading Comprehension By Marcella (2000).
55 Teaching & Developing Vocabulary by J. J. Pikulski (2004).
56 Vocabulary in Language Teaching by Norbert Schmitt (2000).
57 Vocabulary Description Acquisition & Pedagogy by N. Schmitt (1997).
58 TPRI Newsletter Volume A Focus on Vocabulary TPRI (2013).
59 Integrating curriculum through the learning cycle: Content-based reading and vocabulary instruction by B. Spencer A. Guillaume (2006).
60 Strategies to Build Student Vocabularies Camile and Fisher (2004).
61 Academic Vocabulary Developing for Content by N. Hawthorne (2012).
62 Developmental Word Knowledge Author year unknown
63 Linking Research and Practice: Effective Strategies for Teaching Vocabulary in the ESL Classroom Jihyun Nam (2013).
64 Teaching Reading Comprehension To ESl Learners H. Alyousef (2005).
65 Effective Vocabulary Teaching Strategies in ESL by J. Mukoroli (2011).
66 ESL in the Mathematics Classroom by Dr. Richard Barwell (2008).
67 Finding Common Ground, Serving Learners' Needs by The Centre for Literacy Quebec (2008).
68 Korean ESL Students' Use of English Definite Articles by Hannah Morrett (2011).
69 Learning to write in a Second Language: Two Decades of Research by Alister Cumming University of Murcia (2001).
70 Instructional Strategies That Support Differentiation. A Summary of Instructional Strategies by Carol Ann Tomlinson (2010).
71 Differentiated instruction: A Research Basis International Education Journal, Monash University by Pearl Subban (2006).
72 Instructional Strategies for Differentiation by C. Tomlinson (2013).
73 The Basics of Differentiated Instruction C. Tomlinson (1995).
74 The Goals of Differentiation by Carol Tomlinson (2008).
75 Reaching the Needs of All Learners Why Differentiate? by the NC Department of Public Instruction Elementary Division (2010).
76 Establishing Classroom Routines to Differentiate Class by G. Beasley (2009).
77 Four Ways to Differentiate Instruction: Online document http://members.shaw.ca/priscillatheroux/differentiating.html
78 Strategies to Differentiate Instruction by ESL Reading Smart (2013).
79 Differentiated Instruction for English Language Learners by L. Baecher Wisconsin English Journal (2011).

80 Differentiated Instruction Adjusting to the Needs of all learners by Mary Corley (2011). www.ncsall.net

81 Contemporary Classroom Vocabulary Assessment for Content Areas The Reading Teacher Dougherty Stahl, Marco A. Bravo (2010).

82 The Value of Intentional Vocabulary Instruction in the Middle Grades Sadlier Education Press by Fisher & Frey (2010).

83 Strategies to Build Vocabularies SD Dept. of Education by Camille & Fisher (2004).

84 Integrated Vocabulary Instruction North Central Regional Laboratory by Camille & Fisher (2005).

85 Methods of Comprehension Instruction Vocabulary and Language Development Guilford Press, (2002). Author unknown

86 Narrowing the Language Gap The Case for Explicit Vocabulary Instruction Scholastic Professional by K. Feldman & K. Kinsella (2005).

87 Studies & Suggestions on English Vocabulary Teaching & Learning China University Beijing Shigao Zheng (2012).

88 Vocabulary: Research and Teaching Strategies by California Education (2007).

89 Essential Strategies for Teaching Vocabulary (year author unknown).

90 The Frayer model for teaching vocabulary for CBI / CLIL (year author unknown).

91 Vocabulary/Knowledge Rating Comprehension and Learning Strategy by NBSS (2008).

92 The Development of Passive and Active Vocabulary in a Second Language Oxford University Press by Laufer (1998)

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APPENDIX B

The validation personnel for the content analysis.

Name	Position	School
Sister Valentine	Head of School	Saint Joseph Bangna School
Chantana Hongwanusrunya	Head of English program	Saint Joseph Bangna School
Mr. Earl Armstrong	Head of English	Srivikorn School Bangkok
Mr. Claas Lindner	Head of English	Saint Joseph Bangna School
Mr. Tim Cassidy	English language teacher	Saint Joseph Bangna School

Sample of the instrument to validate the content analysis.

GRADUATE SCHOOL OF EDUCATION
CONTENT ANALYSIS VALIDATION

Student name:	Robert McBain
Contact Information phone e-mail:	0845367940 robert3277@gmail.com
Dissertation Title:	A MODEL FOR CONTENT AND LANGUAGE INTEGRATED LEARNING FOR ENGLISH PROGRAMS IN SAINT PAUL DE CHARTRES SCHOOLS IN THAILAND

CONTENT ANALYSIS VALIDITY APPROVAL

Does the validity of this content analysis result have your approval?

☐ Yes I, Tim Cassidy have read the content analysis study and certify that its contents are valid enough to merit it for further progress. My comments and reservations are noted below.

☐ No I, ---------- have read and are unable to certify the validity of this study at this time. My comments and reservations are noted below.

Comments or Suggestions

This Content analysis study gives a very clear indication of how Complex and demanding teaching can be. It is well structured, and Merits further progress in my opinion

Name: Tim Cassidy

Signature: ----------

Date: 15/7/2015

APPENDIX C

Sample list of the diagrams from the content analysis.

1. Academic language
2. Teachers communication & collaboration
3. Materials
4. Cooperative learning strategies
5. Differentiation
6. Curriculum integration
7. Questioning & cuing strategies
8. Project enquiry & problem based learning

Gap-filling - missing words, phrases or sentences. Sequencing -words, sentences or short paragraphs. Grouping segments of text according to categories. Completing a table, grid, flow chart, etc. Labelling a diagram. Predicting - writing the next step or an end to the text.

Underline or highlight particular sections of text (descriptive language, nouns, connectives, topic sentences, etc.). Break the text into chunks and devise a heading for each chunk. Use the information in the text to draw a table, diagram, flow chart, etc. Devise questions about the texts pairs can devise questions for each other.

Other sources of information and support for EAL learners in science. Teachers can to help EAL learners by: using visual, kinaesthetic and concrete activities to model processes. Using online animations and videos, for example Royal Society of Chemistry resources. Unpacking reading - at text and sentence level - with active reading strategies. See Great Idea: DARTs. modelling how to write notes and use content from their reading. See Great Idea: Information exchange. Modelling how to organise and write reports using evidence from reading. Using science dictionaries and glossaries e.g. CREDS translations Reading 'Access and engagement in Science'

Collaboration encourages purposeful talk: if learners have to explain to others, it helps their own understanding

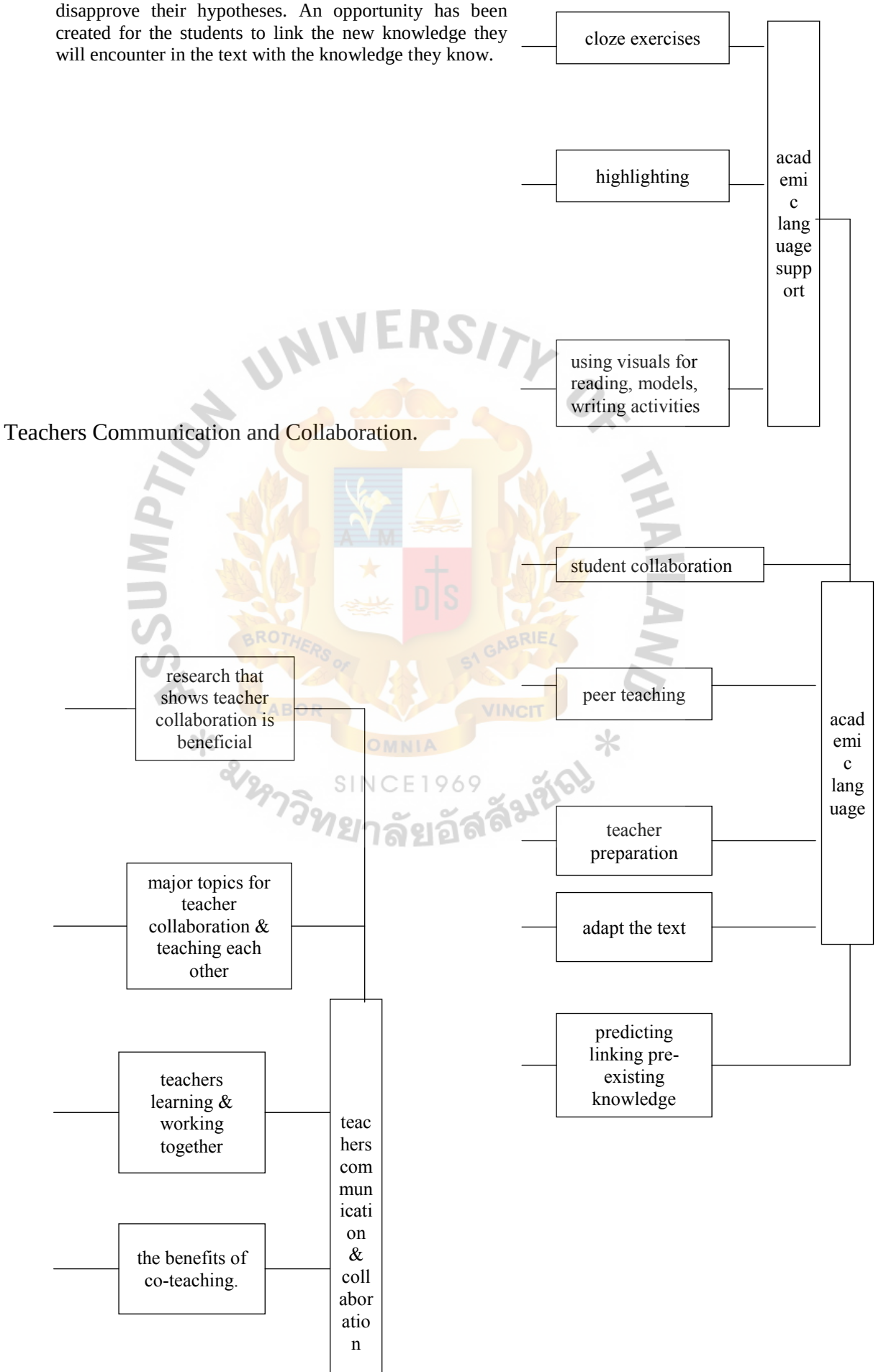
Bilingual Pairs: bridging linguistic barriers one of the strategies that were indicated in the literature, the strategy of using bilingual pairs or peer teaching is considered an effective strategy to facilitate the learning of a language and literacy. Multisensory Approaches Another overarching strategy found during the implementation of this outdoor education workshop was the use of kinesthetic and fine-motor skills to develop scientific meaning.

Preparation Therefore we need to do the following: Identify and display content and language objectives that are reviewed with the learners.

Adapt text so that all levels of ELLs have access to the same information and not a watered down version of the same thing. Teachers must teach concepts linked to student's background.

Predicting: This strategy requires the reader to hypothesize about what the author might discuss next in

the text. This provides a purpose for reading: to confirm or disapprove their hypotheses. An opportunity has been created for the students to link the new knowledge they will encounter in the text with the knowledge they know.



Teachers Communication and Collaboration.

Research suggests that participation in more collaborative professional communities affect teaching practice and improve students' learning. A key finding is the critical role of collaboration and development of a collaborative culture to accomplish in schools to improve teaching practice and increase student achievement. Research shows that teacher collaboration, sometimes called "professional learning communities," gets results. The world's best school systems foster a culture of sharing what works and what doesn't.

Activities for continuous professional development:
1) teachers engage in frequent, continuous, and increasingly talk about teaching practice
2) teachers are frequently observed and provided with useful critiques of their teaching,
3) teachers plan, design, research, evaluate, and prepare teaching materials together they teach each other.

Teachers learning and working together to achieve common goals is considered by many scholars to be a central element of major school reform. Inherent in this call for collaboration is that the act of planning and working together, is a powerful professional development tool.

Co-teaching partnerships require educators to make joint instructional decisions and share responsibility and accountability for student learning.

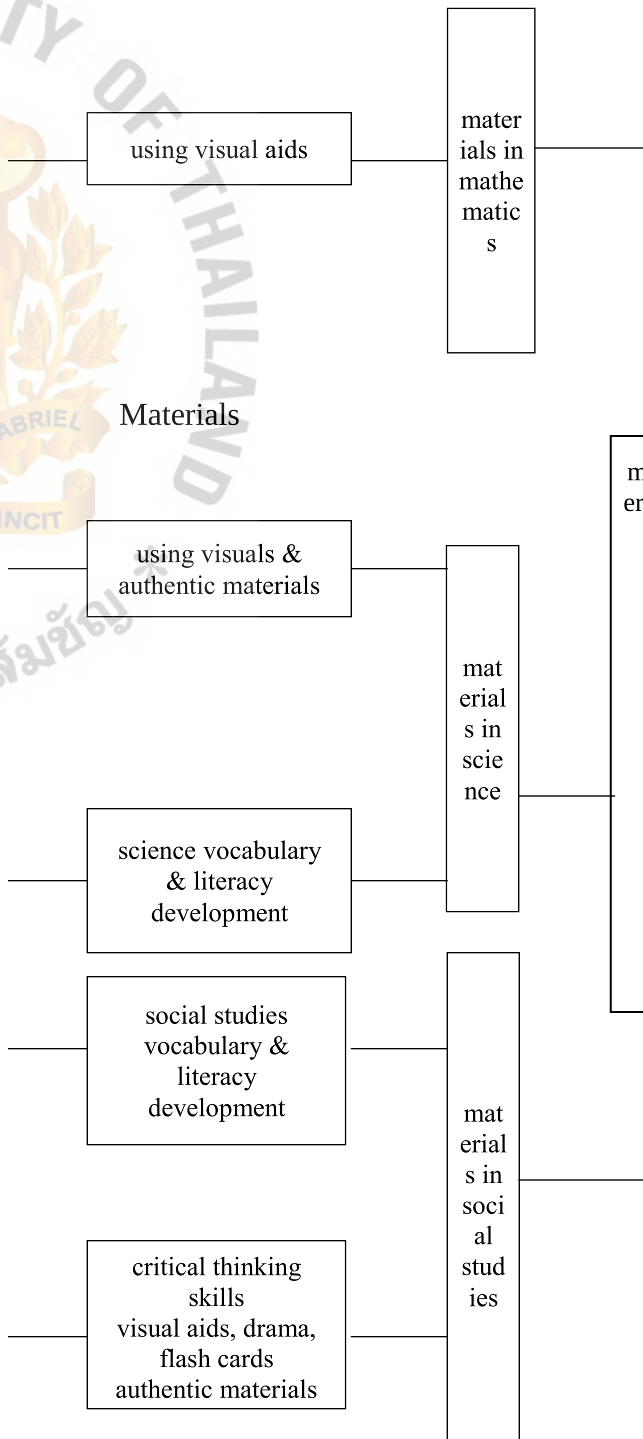
Professional collaboration to improve teacher and student work. As teachers talked together about the qualities they were seeking in student work, they also realized the importance of communicating shared expectations for "good work" to their students.

School-based problem solving develops teachers' shared responsibility for improving teaching and the work expected from students. A teaching relationship in which general and special educators share responsibility for planning, delivery, and evaluation of instruction for a heterogeneous group of students. These teachers work in a coordinated fashion in which they use techniques that allow students of varying abilities to achieve their potential.

Purposeful planning effective instruction for English language learners needs to both support achievement of grade-level learning outcomes and promote language acquisition. All content teachers share the responsibility for language development, out of necessity because students need to learn English to learn content.

Visuals, graphics, concept maps, Venn diagrams, calculators, protractors, course and writing books, lecture equipment, 3d shapes, cubes, technology in Charts, figures scatter & line graphs, column bar & pie charts IT, computers, adapted texts lab work, books as support.

Using authentic materials to get your mind thinking of all the possibilities, authentic materials can include: listening: TV shows, radio, commercials, news broadcasts, documentaries, movies, phone messages, etc. visual: photographs, art works, signs with symbols, postcards,



picture books, etc. printed: restaurant menus, newspaper articles, bulletin board advertisements, company websites, coupons, sales catalogues, travel brochures, maps, telephone books, signs, blogs, movie posters, food labels, etc.

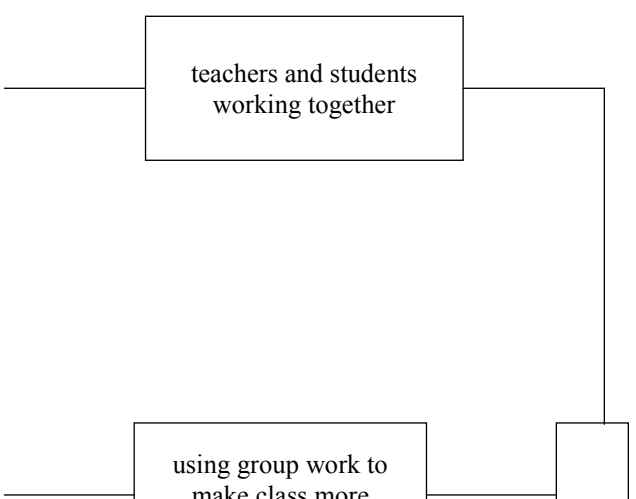
Vocabulary, grammar and reading and writing worksheets science based, technology items too.

Vocabulary, grammar and reading and writing worksheets based on social studies ideas and study subjects, for writing on a host of social studies subjects history, economics, maps, landforms.

Developing materials that practice LOTS & HOTS (critical thinking) field trips and lessons that apply realia museums, parks, and places of cultural interest. Use of visual aids realia, charts, diagrams graphs, tables, graphic organisers, drawings, posters, tables, maps, props, multimedia presentations, storyboards, drama and role-play activities, adapting texts to suit grade levels, flash cards, technology items

Cooperative Learning Strategies

Collaborative tasks include tasks that involve learners & teachers in producing key subject-specific vocabulary in meaningful pair or group work activities. Tasks may be pairs of learners classifying vocabulary into different columns pairs can ask and answer questions, groups can explain how they plan to research & present the information they have found. Activities should support processing of new history content and language.

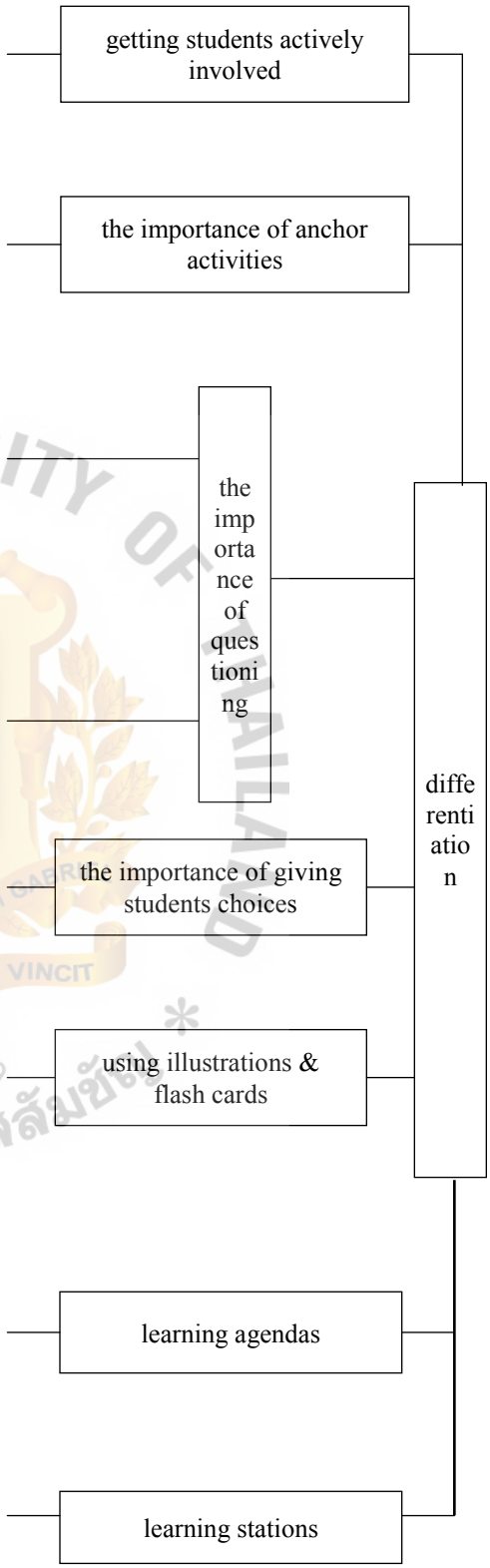


Use cooperative learning /small groups/whole class. Make the lessons highly interactive – construct knowledge together –accountability- comprehension and production These strategies provides for diversity and individuality in learning styles and aids students in the socialization process. Paired and group activities promote student interaction and facilitate working with the language and content. The ideal size for these groups ranges from 2 to 5 students.

Collaborative tasks include tasks that involve learners in producing key subject-specific vocabulary and structures in meaningful pair or group work activities. Activities should support processing of new geography content and language.

Provide group opportunities. Group settings are the perfect way to get your kids thinking. When children are around their classmates working together, they get exposed to the thought processes of their peers. They learn how to understand how other people think and that their way is not the only route to explore. When this valuable skill is introduced to students early on in the education process, students will be capable of having complex thoughts and become better problem solvers when presented with difficulty. It's important for students to possess a variety of skills, but it's just as important for them to understand the skills and how, and when to use them.

Differentiation



Experiential exercise. Students love to re-enact history, so get them actively involved! One powerful example is a slave ship experiential exercise. Show students a diagram of the inside of a slave ship and discuss.

Extension menus can be used for gifted students and fast finishers, or as centre activities. Create extra activities for students to further their understanding of the concepts taught. Students can choose a set number of items to complete, or can be required to choose 3 in a tic-tac-toe pattern so that you can ensure they have a variety of activities.

Sequential questioning this technique is also from Donald Graves. Either you or a special visitor presents an object relevant to the curriculum. No explanation is given, but students can ask as many questions as they want. This works especially well for items for which student have little background information because they must actively construct knowledge.

History & geography questioning: Questioning is important because: it stimulates the mind, it builds a picture, develops imagination, helps student learning by building step by step journey, demonstrates learning and progress in a lesson.

Choice of task: Allow students to choose how they present the final version of their work. This could either be done through different forms of writing, or could stretch to more adventurous formats such as debate, artwork, computer generated graphics.

Crowd sourcing: A picture, or other simple visual or audio stimulus, can be used to ask students what they think is going on e.g. a picture of the trenches in World War One, or a rainfall graph etc. Based on the discussion that emerges from students' prior knowledge, information will be shared between students.

A learning agenda is a list of projects or activities that must be completed during a specific period of time, usually during a unit of study. Typically, students work independently on their agendas, asking for support when needed and collaborating with other learners when necessary.

Using centers involves setting up different spots in the classroom where students work on various tasks simultaneously. Curriculum overlapping students needing more enrichment might work on objectives that are different from those being addressed by their peers. Project-based instruction project-based instruction is especially appropriate for students with diverse learning profiles as many student needs and learning styles can be addressed.

Curriculum Integration

Give language students time to process questions and formulate responses. Speak slowly and use clear articulation. Elicit nonverbal responses: Like thumbs up or down. Nonverbal responses will help you check for understanding without requiring students to produce language. ELLs can participate and show that they understand a concept, or agree or disagree with an idea, without having to talk.

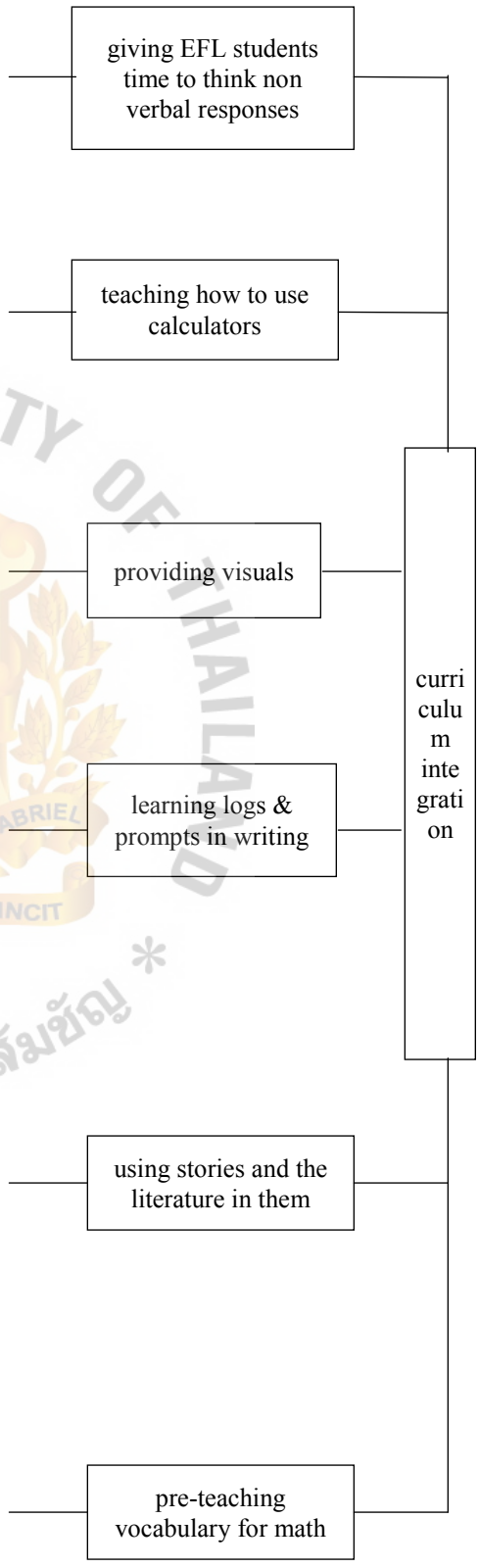
Teach students how to use a calculator. Based on background and prior educational experience, students might not be familiar with how to use a calculator nor some of the more sophisticated models, such as the graphing calculator. Give students a chance to practice solving problems with their calculators. Look for interactive games that offer students a chance to practice their mathematical skills video teaching and learning for NYS educators.

Provide visual cues, graphic representations, gestures, realia, and pictures. Offer students the chance to work with objects and images in order to master vocabulary. Identify key phrases or new vocabulary to pre-teach. This strategy will help students decide which math function they should apply. Example: "more than" means "add."

Learning logs: As students start class, they are given a prompt to which they respond for a few minutes in writing. Think write-share. Note-taking/note-making: Students may be accustomed to taking notes, but now ask them to make notes as well. Shared writing a third-grade teacher used shared writing with her students to review what they had learned in their geometry unit. Class book using a similar process, a teacher can make a class book with students.

Relying on literature to make complex and abstract concepts easy to understand. Students' science and math literacy achievement is assessed using multiple instruments, including project-developed unit tests to measure students' knowledge of science concepts and inquiry prompts for expository writing to measure students' levels of English proficiency and abilities to explain science concepts in writing; and elicitations with a small number of students as they design an experiment and write about the activity, as well as their work samples during classroom instruction. Incorporates stories into the teaching and learning of mathematics introduces math concepts and contexts in a motivating manner acts as a source for generating problems and problem solving skills.

Pre teaching vocabulary in the mathematics classroom removes cognitive barriers that prevent children from grasping new content. Teachers should model vocabulary words using appropriate problems as examples. Vocabulary should be placed strategically in questions to reinforce vocabulary knowledge along with conceptual knowledge. Demonstrate that vocabulary can have multiple meanings. Encourage students to offer bilingual support to each other.



Questioning and Cuing

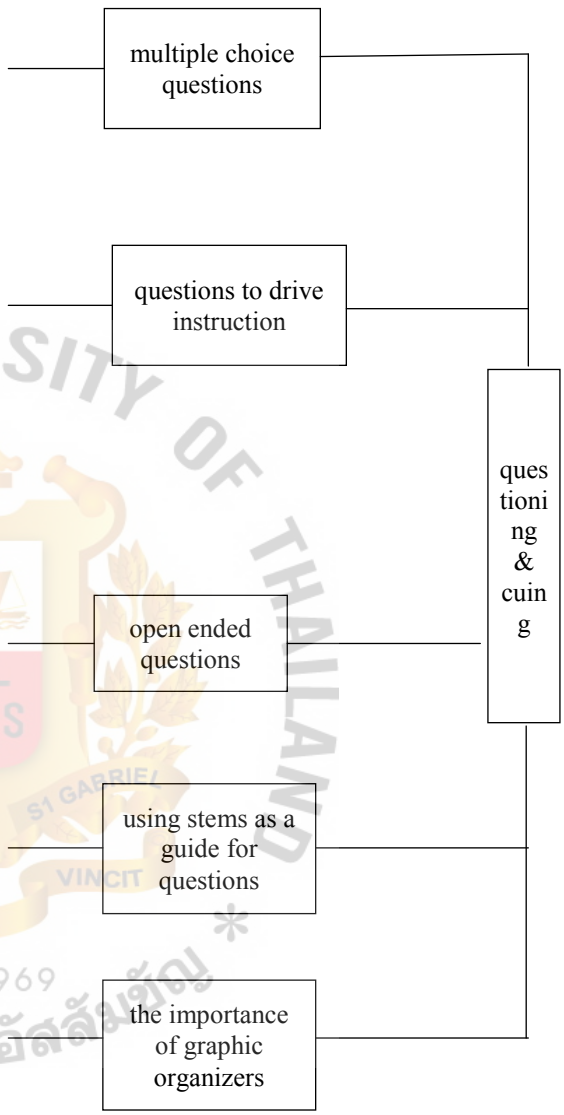
Multiple choice questions description. This question format requires English language reading skills generally above the level of ELL students.

Not surprisingly, teacher questioning usually drives the type and quality of classroom discussions. The IRE/F pattern discussed previously is characterized by questions to which the teacher already knows the answer and results in the teacher unintentionally expecting. In fact, researchers have found explicit, "right there" questions are used about 50% of the time in classrooms and that history and social studies "discussions" can devolve into a series of factual exchanges.

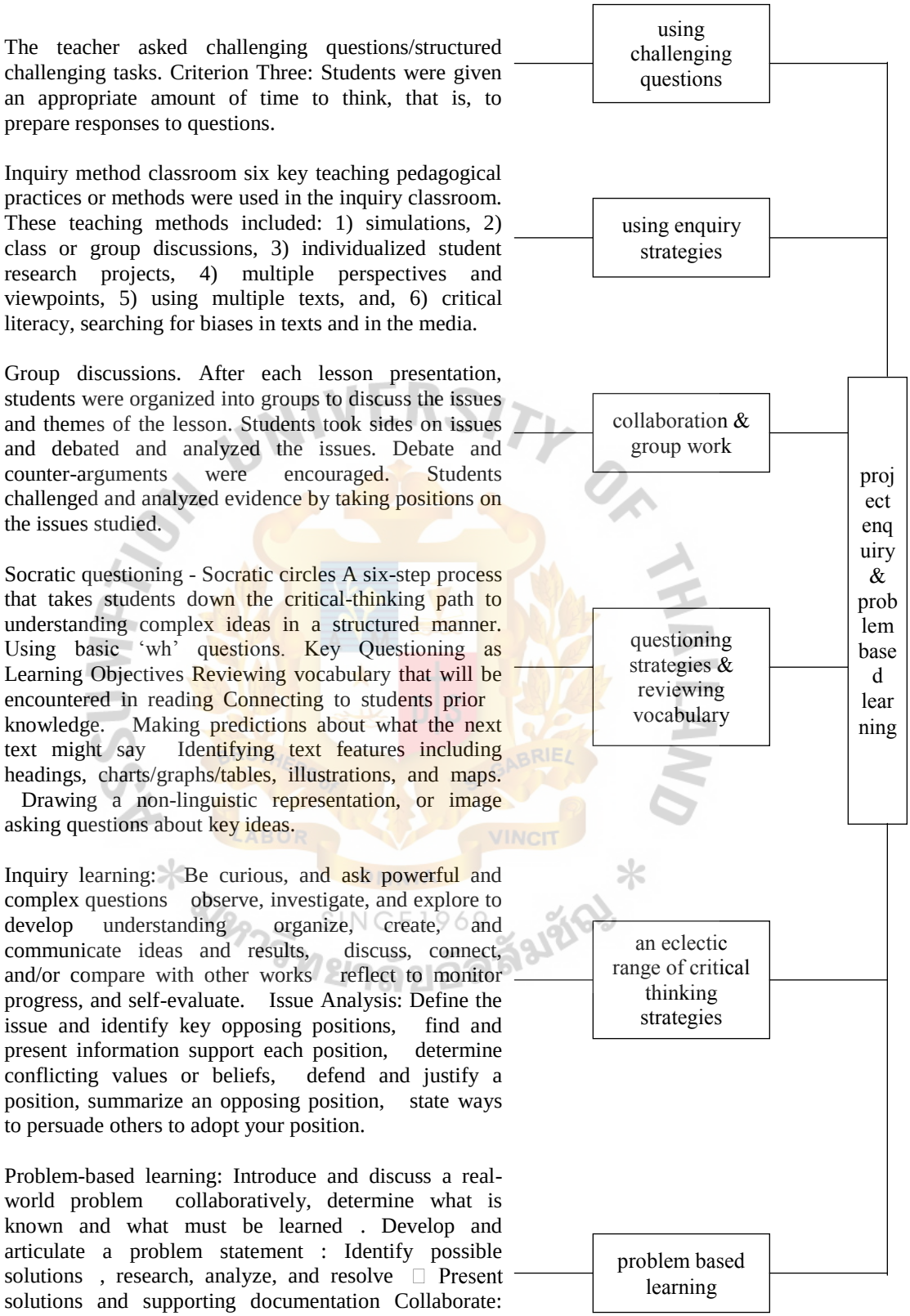
In contrast, open-ended questions that do not have quick "right" or "wrong" answers promote greater levels of thinking and expression. During social studies lessons there should be more of an emphasis on promoting classroom discourse by students questioning one another, separating fact from opinion, reasoning rather than memorizing positions and outcomes, making connections or generalizations, and drawing conclusions.

Develop a questioning stem guide.

Graphic organizers (e.g organisms/ tables/flow charts. Provide access to higher-level thinking and content structures/ schema Focus attention on key words, relationships, and ideas . Make text more accessible by dividing it into small chunks and associating it with graphics.



Project Enquiry and Problem Based Learning



APPENDIX D

Schools in Saint Paul De Chartres Schools with Thai and English Programs.

No.	School name	Thai Program	English Program
1	Assumption Convent Silom Bangkok	yes	no
2	Assumption Convent Lumnarai	yes	no
3	Assumption Convent Lopburi	yes	no
4	Assumption Convent Pathumwan	yes	no
5	Japha-Ubonrat Chaing Mai	yes	no
6	Rosario Wittaya Nongkhai	yes	no
7	Saint Joseph Maejamp	yes	no
8	Santa Cruz Convent Bangkok	yes	no
9	Saint Joseph Convent Bangkok	yes	yes
10	Saint Francis Xavier Muanthong Thani	yes	yes
11	Saint Francis Xavier Nontaburi	yes	no
12	Saint Joseph Nakon Sawan	yes	no
13	Saint Paul Convent School Sriracha	yes	no
14	Saint Joseph School Rayong	yes	no
15	Saint Joseph Bangna	yes	yes
16	Saint Joseph Sri Petchaboon	yes	no
17	Saint Joseph Tippawan	yes	no
18	Saint Paul Nongkhai	yes	no
19	Saint Joseph Koh Samui	yes	no
20	Saint Joseph Petchaburi	yes	no
21	Saint Joseph Tharae	yes	no
22	Saint Joseph School Mae-ra-mar	yes	no

APPENDIX E

A list of the questionnaires used in the survey.

The Questionnaire for teachers.

The Questionnaire for students.

Saint Paul de Chartres Schools

Teacher Survey

Name of School: ---------- Male: ------ Female: ------ Nationality: ----------
How long have you been at this school? ---------- What is your native language? ----------

Tick the subjects you teach? science biology physics chemistry social studies math

Do you also teach English? yes/ no

Which class(es) do you teach? M1 M2 M3 M4 M5 M6

Please answer each question by marking a according to what is true about the subject(s) that you teach.

		always	frequently	sometimes	very rare	never
	1. Vocabulary					
1.	English teachers help to teach vocabulary for my subject.					
2.	I have meetings with English teachers to teach vocabulary.					
3.	I review the vocabulary for my subject in class.					
4.	I pre-teach vocabulary for my subject.					
5.	I give vocabulary assignments for my subject.					
6.	I vary vocabulary exercises in my class.					
7.	I instruct students to use a dictionary for new words.					
	2. Grammar					
8.	English teachers help to teach grammar for my subject.					
9.	I have meetings with English teachers to teach grammar.					
10.	I review the grammar for my subject in class.					
11.	I pre-teach grammar for my subject in class.					
12.	I give grammar assignments for my subject.					
13.	I vary the grammar exercises in my class.					
14.	I instruct students to use grammar books for my subject.					
	3. Reading					
15.	English teachers help to teach reading skills for my subject.					
16.	I have meetings with English teachers to teach reading.					
17.	I re-write texts to make them easier for students to read.					
18.	I pre-teach reading skills for my subject.					
19.	I give reading assignments for my subject.					
20.	I vary the reading activities in my class.					
21.	My classes all read together in my subject.					
22.	Students read in pairs in my class.					
	4. Writing					
23.	English teachers help to teach writing skills for my subject.					
24.	I have meetings with English teachers to teach writing.					
25.	I pre-teach writing skills for my subject.					
26.	I give writing assignments for my subject.					
27.	I vary the kinds of writing exercises for my class.					

		always	frequently	sometimes	very rare	never
5. Classroom Teaching Practices						
28.	I use paired activities in the class.					
29.	I use listening activities in my class.					
30.	Students do presentations in my class.					
31.	I use group work activities in the class.					
32.	I use task-based learning in my subject.					
33.	I use real objects in the class when I teach.					
34.	I teach students study ideas for my subject.					
35.	My students mostly sit and listen to me in class.					
36.	I use one to one teaching to help students' progress.					
37.	I use student centered learning activities in my class.					
38.	I teach with flash cards to make understanding easier.					
39.	I use questions as part of my general teaching strategy.					
40.	I use different teaching methods to suit different students.					
6. Technology						
41.	I use videos to teach in class.					
42.	I use computers to teach in class.					
43.	I use hand held devices to teach in class.					
44.	I use power point for teaching my subject.					
45.	I vary the kinds of technology I use in this class.					
46.	I use sound equipment for listening and speaking in class.					
7. Critical Thinking						
47.	I use problem-solving tasks in my class.					
48.	I teach critical thinking as part of my subject.					
49.	I use questions as part of my teaching strategy.					
50.	I vary the kinds of questions during my class.					
51.	I make lesson plans incorporating critical thinking.					
52.	I vary the kinds of critical thinking lessons in my class.					
8. Preparations for Teaching						
53.	I write lesson plans for my subject.					
54.	I have teacher training for my subject.					
55.	I pre-teach important theories to the class.					
56.	I write subject objectives in my lesson plans.					
57.	I use pre and post tests as part of my planning.					
58.	I write language objectives in my lesson plans.					
59.	I observe other teachers to improve my teaching.					
60.	I vary the kinds of teaching methods in my class.					
61.	I use known teaching models for my subject.					
62.	I adapt teaching materials to suit my students' levels.					
63.	My lesson plans are part of a series of connected lessons.					
64.	I prepare lessons built on student's background knowledge.					

The questionnaire for students.

Saint Paul de Chartres Schools Student Survey English Program

การสำรวจนักเรียนของคณะเซนต์ปอล เดอ ชาตร์

Name of School: ---------- Class: ---------- Boy: ----- Girl: -----
ชื่อโรงเรียน ชั้น ชาย หญิง

Nationality: ---------- How long have you been at this school? ----------
สัญชาติ คุณเรียนอยู่ที่โรงเรียนนี้นานเท่าไร

What is your main language ภาษาหลักของคุณคือภาษาอะไร ----------

Please answer each question below by marking a according to what is true about your subjects.
โปรดอ่านคำถามแต่ละข้อข้างล่างนี้ แล้วทำเครื่องหมาย a ตามความเป็นจริงเกี่ยวกับวิชาที่เรียนของคุณ

			never ไม่เคยเลย	very rare แทบจะไม่เคย	sometimes บางครั้ง	frequently บ่อย	always เสมำเสมอ
1.	I learn new words in this class. ฉันเรียนคำศัพท์ใหม่ในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
2.	I learn grammar for this class. ฉันเรียนรู้หลักไวยากรณ์ในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
3.	I do listening activities in this class. ฉันทำกิจกรรมการฟังในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
4.	My class reads together in this class. นักเรียนในห้องเรียนของฉันอ่านพร้อมกันทั้งห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
5.	I read with a friend in this class. ฉันอ่านกับเพื่อนในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
6.	I do writing exercises in this class. ฉันทำแบบฝึกหัดในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
7.	I learn new ways to study in this class. ฉันเรียนรู้วิธีการเรียนรู้ใหม่ๆ ในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
8.	I learn how to solve problems in this class. ฉันเรียนรู้วิธีการแก้ปัญหาในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
9.	I give presentations in this class. ฉันนำเสนอ/รายงานหน้าชั้นเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					

10.	I use pictures to learn in this class. ฉันใช้รูปภาพในการเรียนรู้ในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					

			never ไม่เคยเลย	very rare แทบจะไม่เคย	sometimes บางครั้ง	frequently บ่อย	always เสม่ำเสมอ
11.	I learn by watching videos in this class. ฉันเรียนรู้โดยการดูวีดิโอในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
12.	I learn in groups in this class. ฉันเรียนรู้เป็นกลุ่มในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
13.	I use diagrams to learn in this class. ฉันใช้แผนภาพในการเรียนรู้ในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
14.	The books are easy to understand in this class. หนังสือเรียนในชั้นเรียนนี้เข้าใจง่าย	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
15.	I do projects in this class. ฉันทำโครงงานในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
16.	I do experiments in this class. ฉันทำการทดลองในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
17.	I use a dictionary for new words in this class. ฉันใช้พจนานุกรมหาความหมายคำศัพท์ใหม่ๆ ในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
18.	I do different things in this class every day. ฉันทำสิ่งต่างๆ หลากหลายกันในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
19.	I use computers in this class. ฉันใช้คอมพิวเตอร์ในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					
20.	I get different kinds of questions to study in this class. ฉันได้คำถามหลากหลายเพื่อที่จะศึกษาในห้องเรียน	คณิตศาสตร์					
		วิทยาศาสตร์					
		สังคมศึกษา					

APPENDIX F

The list of experts for the questionnaires.

Name	Position	School
Sister Valentine Mungmai	Head of School	Saint Joseph Bangna School
Sister Atchara Supavai	Head of School	Saint Joseph Convent Silom
Sister Dominic Kitchareon	Head of School	Saint Francis Xavier School
Chantana Hongwanusrunya	Head of English program	Saint Joseph Bangna School
Mr. Tim Cassidy	English language teacher	Saint Joseph Bangna School

A sample of the validity approval form for the questionnaire.

GRADUATE SCHOOL OF EDUCATION

VALIDITY APPROVAL FORM FOR QUESTIONNAIRE

Student name: Mr. Robert McBain

Contact Information: (Phone/email): 0845367940 / e-mail robert3277@gmail.com

Dissertation Title: A Model For Content and Language Integrated Learning for English Programs in Saint Paul De Chartres Schools In Thailand

Validation Approval of Questionnaire

Do you approve of the validity of the questionnaire?

☑ Yes, I, Sister Valentine Nungmai have read and certify the validity of the questionnaire. My comments, suggestions are noted below.

☐ No, I, ... , have read and cannot certify the validity of the questionnaire. My comments, suggestions are noted below.

Comments/ Suggestion:

.....

.....

.....

Signature of validation expert: ✓ Sister Valentine

Date:

Sister Valentine
Head of School
Saint Joseph Bangna School 75 Moo 9 Soi Bearing
107 Sukhumvit Road Samutprakarn 10270 Bangkok Thailand

A sample of the item of congruence for the questionnaires.

A MODEL FOR CONTENT AND LANGUAGE INTEGRATED LEARNING FOR ENGLISH PROGRAMS IN
SAINT PAUL DE CHARTRES SCHOOLS IN THAILAND

Objectives:

1. To explore the instructional practices used in content subjects in English.
2. To identify students learning practices in content subjects.
3. To identify the instructional practices used in content subjects.
4. To develop a model for content subjects.

Instruction

Please read the following statements for the learning practices and objectives for teaching practices. For this study the term "method" is used in a wide sense, which includes strategies, activities, exercises, models and actions that promotes good practices in an English program. As the chosen expert, please decide whether the items measure the intended learning / skills using the following criteria.

The score = 1, if you are sure that this item measures the intended skill.

The score = -1, if you think that the item does not measure the intended skill.

The score = 0, if you are not sure if the item measures the intended skill.

	1. Vocabulary	1	-1	0
1	English teachers teach vocabulary for my subject.			
2	I have meetings with English teachers to teach vocabulary.			
3	I review the vocabulary for my subject in class.			
4	I pre-teach vocabulary for my subject.			
5	I give vocabulary assignments for my subject.			
6	I vary vocabulary exercises in my class.			

7	I instruct students to use a dictionary for new words.			

APPENDIX G

Permission from the schools to do the study.

Name	Position	School
Sister Valentine Mungmai	Head of School	Saint Joseph Bangna School
Sister Atchara Supavai	Head of School	Saint Joseph Convent Silom
Sister Dominic Kitchareon	Head of School	Saint Francis Xavier School

A sample permission letter, from one of the schools.

Home:
Wealthy Tower Apartments
Sukumwit 66/1/สุขุมวิท 66/1
Bang Na
Bangkok 10260
Mobile: 0845 367 940
E-mail robert3277@gmail.com
Fax: 027449966
Work:
Saint Joseph Bangna School
75 Moo 9, Sukhumvit 107 Road,
Samrong Nuea, Amphoe Mueang
Samutprakan, 10270

Nov 6, 2015

Sister Valentine
Saint Joseph Bangna School
75 Moo 9, Sukhumvit 107 Road,
Samrong Nuea, Amphoe Mueang
Samutprakan, 10270

Reference: Permission to gather research at your school

Dear Sister Valentine,

I am Robert McBain, and I am currently studying at Assumption University for my Ph.D. in Educational leadership (curriculum and instruction). I teach Social Studies to Grade 10-12 and English to Grade 8 at Saint Joseph Bangna School.

I have been advised by the committee at Assumption University, that as part of my dissertation studies, I should ask you to confirm that I have permission to gather research at your school, for the purposes of research in to my studies. If this is appropriate please be so kind as to confirm this by signing on the space below.

I would also, at this stage, like to thank you and all the sisters of Saint Paul de Chartres Schools for your continued support in allowing me the necessary time and facility at school to complete my studies. I hope to graduate in 2016.

Thank you in anticipation.

Truly yours,

Sister Valentine .....

Mr. Robert A. Mcbain

APPENDIX H

The Krejcie & Morgan sample size chart.

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

APPENDIX I

Interview transcripts

The interview results for program leaders

Q1. Do you have meetings with your foreign teachers? (Saint Joseph Bangna English program leader) We have a formal meeting at the beginning of each semester. It is up to the teachers themselves if they collaborate and cooperate together after that. (Saint Joseph Convent English program leader) Yes we have regular meetings with department heads and with the whole of the English program teachers together once per semester. (Saint Francis Xavier English program leader) At Saint Francis Xavier school meetings are held at the beginning of each semester. The foreign teachers share offices so it's up to them to discuss anything related to academic work for the improvement of themselves and the students.

Q2. What are the main subjects of these meetings? (Saint Joseph Bangna English program leader) They are to inform the foreign teachers about the plans for the forthcoming semester. The only instructional advice discussed is when teachers write lesson plans, & evaluate them themselves. Curriculum requirements are also discussed so that teachers know what documents are required. Teaching schedules are also discussed at a one to one meeting so that anyone can discuss things. Other meetings are related to seminars that form part of the schools requirements for all teachers to attend. (Saint Joseph Convent English program leader) Teachers hand in their lesson plans for the forthcoming semester. We also discuss about feedback from the teachers and student behavior. (Saint Francis Xavier English program leader) We have meetings that tell the foreigners what is happening during the next year. They

are mainly for the organization of seminars also to discuss any forthcoming events in the school calendar. Group seminars are also held at times when the exams are being held and they concentrate on teacher development. We also discuss lesson plans and what teachers are going to do.

Q3. To what extent do you encourage collaboration & cooperation between teachers? (Saint Joseph Bangna English program leader) It's really up to the teachers if they want to collaborate & cooperate between themselves. The school doesn't get involved in what teachers agree to do for any subject. Grade 1-3 teachers integrate to some extent with math, science and English as they have the same classes. Its up to each teacher to teach grammar according to the unit they are teaching. Grammar is also taught by Thai teachers but it is separate grammar from what the foreign teachers are teaching. (Saint Joseph Convent English program leader) This is an issue that we have no formal control, and because of this we leave this up to the foreign teachers. (Saint Francis Xavier English program leader) The foreign teachers have their own way of teaching and its nothing like the Thai teachers methods. The teaching of the grammar and the background knowledge is the responsibility of the foreign teachers as to what they teach. Foreign teachers share offices so its up to them to share or organize meetings as and when they want.

Q4. Describe the planning & preparation times' teachers have, to plan and develop their lessons? (Saint Joseph Bangna English program leader) At this school we assume that teachers plan their lesson in between and before classes, how they plan them and how much time they take is up to them. We assume that the periods the

teacher is not teaching are the periods they are using to plan their next lesson. It states in the teacher's contracts that the free time in between classes are the periods they use for lesson planning. We have computers in each faculty room that are used every day by teachers to plan their lessons. But they usually use their own computers. (Saint Joseph Convent English program leader) Teachers here have time between lessons to prepare their classes. They have 16 periods a week to prepare their lessons. (Saint Francis Xavier English program leader) Teachers mostly use the time in between classes and early morning before the moral class to plan their lessons. We don't have any more facilities than computers and what the teachers have in their offices like printers. However new teachers are often overwhelmed by the sheer scale and schedules they have to adhere to and so this has an effect.

Q5. Do you require that foreign teachers provide lesson plans prior to teaching? (Saint Joseph Bangna English program leader) Lesson plans are required by all teachers for all subjects, this is not only an administrative requirement but it is also part of the Ministry of Education requirements that all teachers design their lessons so that elements of planning are seen. (Saint Joseph Convent English program leader) Yes teachers here are required to submit weekly lesson plans in a yellow book. (Saint Francis Xavier English program leader) The lesson plans are submitted at the beginning of each semester and they are for all subjects and for all teachers too lesson plans are also required weekly.

Q6. To what extent do you encourage the teachers with regards to the academic teaching of integrated content and language to use group learning or student centered

learning or anything related to it within the English program? And does your program have any formal policy of curriculum integration? (Saint Joseph Bangna English program leader) The foreign teachers at this school organise their own classes in their own way and the school administration doesn't advise teachers which methods to teach for any class as the full responsibility is with the teacher. (Saint Joseph Convent English program leader) We would like to encourage more student-centered learning but we don't have any specific methods to implement. We relay on the foreign teachers sharing any ideas they have. We ask that foreign teachers focus their attention and communicate more information with regards the weak students prior to any formal exams. (Saint Francis Xavier English program leader) The teachers at this school carry out the teaching in the classroom in their own way, they are the teachers in the class and they decide which method to use.

Q7. Explain the scale of critical thinking that is utilized as a teaching strategy. (Saint Joseph Bangna English program leader) Critical thinking is a part of teaching that teachers design as part of their lessons. The school doesn't advise teachers for this it's up to the teachers to include critical thinking in to their lessons as and when they think its necessary according to the subject. The school does however insist that certain parts of mid-term and final tests do include critical thinking in them. (Saint Joseph Convent English program leader) Again we relay on the foreign teachers putting this in to their lesson plans as and when they feel it is necessary. We look for life skills, problem solving skills, and opportunities for students to practice learning using presentations. As for integration, this was tried out last year where students had to integrate science and math and where the teachers helped students to compose the

report. But we found it difficult to implement it any more because of the changes that it would require in the schedules and timings of teachers. (Saint Francis Xavier English program leader) Critical thinking is important and we encourage teachers to use it but it's difficult to use for many students, as many are shy at having to use any language skills. Teachers also need more time to be trained in this area of teaching and also to plan this especially in content subjects.

Q8. Explain the scale of differentiation as a classroom strategy. (Saint Joseph Bangna English program leader) The idea of differentiating any class is up to each and individual teacher as they organize their classes any way they want. (Saint Joseph Convent English program leader) This is a subject that relates to each and individual teacher, the teacher know the students best and its up to the teacher to implement this for each class. (Saint Francis Xavier English program leader) Differentiation takes up too much of the teachers planning time and many teachers don't know how to do it, experts need to teach teachers how to do it. Class sizes are also too big for this to have any effect. Furthermore too much of the foreign teachers time is taken up teaching basic grammar they may not have time for any more in-class development.

Q9. What teacher development plans do your teacher have? (Saint Joseph Bangna English program leader) Some teachers at this school have Masters degrees. However twice a year the school organizes seminars for all teachers. Also teachers have to evaluate their lesson plans using a specific form. (Saint Joseph Convent English program leader) Every term we have seminars for all of the teachers and if any teacher has an outside seminar then they report it back to the teachers when they

return. (Saint Francis Xavier English program leader) All the foreign teachers attend seminars.

Q10. Explain how you monitor the teachers for the content subjects. (Saint Joseph Bangna English program leader) Every teacher is observed twice a semester and this is recorded as part of the school documents. For each observation every teacher has to provide a lesson plan for that observed period and two other observers carry out the observation and give feedback once it's completed. For new teachers they have to fill in a set of three essay type questions to help fill-in some of the more theoretical background knowledge for their professional development because they are new to the job. Also at this school the lesson plans are counted and approved by the English program manager or another member of staff. (Saint Joseph Convent English program leader) The only method we have at this school is that of formal observations of teachers as they teach. (Saint Francis Xavier English program leader) The observations at this school are done by senior teachers and the school uses a special form for this task. It's the policy of the Saint Paul de Chartres schools that all teachers are observed during each semester more than once, its also a requirement from the Ministry of Education for this to be filed as part of the governments own teacher development plans.

Q11. What teaching materials does the school provide for content teachers? (Saint Joseph Bangna English program leader) Teachers make themselves. The school has recently completed the installation of overhead projectors in all the classrooms in the school. (Saint Joseph Convent English program leader) We have a computer system where teachers can use overhead projectors, and we have the usual collection of flash

cards, worksheets and books. We encourage teachers to concentrate on open style questions to allow more opportunities for students to talk. (Saint Francis Xavier English program leader) Many classrooms have overhead projectors to show movies and slides. Any other special items that teachers need the teachers have to make them for each class these are the responsibility of the teachers not the school.

Interview Frequency Data for Saint Joseph Bangna School Program Leader

Communications		
questions	frequency	answers
Q1 Do you have meetings with your foreign teachers?	Twice a year.	Meetings are held between administration and all teachers according to their grade.
Q2 What are the main subjects of these meetings?		Lesson plans. Curriculum issues. Evaluate their lesson plans. Teaching schedules. To attend seminars. Allocate event responsibilities.
Q3 To what extent do you encourage collaboration between teachers?		The school doesn't get involved in organizing teachers meetings.
Classroom teaching practices		
Q4 Describe the preparation times teachers have to plan their lessons?	How often they do this is up to them.	Teachers use the time between lessons to plan their lessons.
Q5 Do you require that foreign teachers provide lesson plans prior to teaching?	Yes twice a year before semester starts.	This is a requirement by the MOE that all teachers make them.
Q6 What extent do you encourage teachers to use student centered learning?	How often they do it is up to them.	Teachers know their class better than anyone so they can do this when they think it's appropriate.
Q7 Explain the scale of critical thinking that is utilised as a teaching strategy?	The teachers choice.	It's a difficult subject, but its encouraged its left to the teacher to do when they feel they can teach it.
Q8 Explain the scale of differentiation as a classroom strategy.	How often teachers is up to them.	Teachers do this as and when they decide.
Teachers professional Development		
Q9 What teacher development plans do your teacher have?	Seminars twice a year.	Teachers attend a seminar in school. They also evaluate their own lesson plans.
Q10 Explain how you monitor the your teachers for the content subjects.	Observed twice a semester.	Teachers provide lesson plans for each observation. New teachers complete set questions on how they work. Feedback is given for each observation.
Materials		
Q11 What teaching materials does the school provide for content teachers?	Overhead projectors can be used any time.	Teachers make these themselves as and when they require. The school provides overhead projectors and computers.
Q11 What teaching materials does the school provide for content teachers?	Overhead projectors can be used any time.	Teachers make these themselves as and when they require. The school provides overhead projectors and computers.

Interview Frequency Data for Saint Joseph Convent School Program Leader

Communications		
questions	frequency	answers
Q1 Do you have meetings with your foreign teachers?	Twice a year.	The meetings are between the department heads to discuss the forthcoming semester.
Q2 What are the main subjects of these meetings?	No specific time given.	To hand in their lesson plans for the semester. Feedback from other teachers and students is also discussed.
Q3 To what extent do you encourage collaboration between teachers?	No specific time given.	The school has no formal control, its up to the teachers to have their own meetings as and when they can.
Classroom teaching practices		
Q4 Describe the preparation times teachers have to plan their lessons?	Weekly during the free periods.	Its up to the teacher as and when they do this.
Q5 Do you require that foreign teachers provide lesson plans prior to teaching?	Yes weekly	Teachers also hand in the yellow book stating what they intend to teach each week.
Q6 What extent do you encourage teachers to use student centered learning?	No specific time given.	Have no formal way to do this, its left for the teachers to do this as and when they can in their lessons.
Q7 Explain the scale of critical thinking that is utilized as a teaching strategy?	No specific time given.	Tried this but it was complicated as it requires changes in schedules and so it was cancelled.
Q8 Explain the scale of differentiation as a classroom strategy.	No specific time given.	This is an individual teacher responsibility when they feel its is necessary, but they have no formal training in this.
Teachers professional development		
Q9 What teacher development plans do your teachers have?	Twice per year.	Every teacher attends some kind of seminar, if they do this individually then they report back with a summary.
Q10 Explain how you monitor the your teachers for the content subjects.	Twice per semester.	Teachers are monitored by direct observations in class.
Materials		
Q11 What teaching materials does the school provide for content teachers?	No specific time given.	School provides overhead projectors, computers, printers and copy facilities. But teachers are encouraged to use a more open teaching approach to encourage students to talk more using English.

Interview Frequency Data for Saint Francis Xavier School Program Leader

Communications		
questions	frequency	answers
Q1 Do you have meetings with your foreign teachers?	Twice a year.	Foreign teachers share offices so they may also have their own meetings.
Q2 What are the main subjects of these meetings?	No specific time given.	To inform teachers about the school plans for the forthcoming year. Discuss schedules and lesson plans.
Q3 To what extent do you encourage collaboration between teachers?	No specific time given.	Foreigners share offices so they meet together as and when they want.
Classroom teaching practices		
Q4 Describe the preparation times teachers have to plan their lessons?	Daily between lessons.	Its up to the teachers to plan their own times in between classes and early morning. New teachers are overwhelmed about what they have to do.
Q5 Do you require that foreign teachers provide lesson plans prior to teaching?	Beginning of each semester and weekly.	Lesson plans are a requirement at the start of each year as it allows the school to see what the teacher has planned.
Q6 What extent do you encourage teachers to use student centred learning?	No specific time given.	Its up to the teachers to plan this as and when they need to as they know their classes best.
Q7 Explain the scale of critical thinking that is utilised as a teaching strategy?	No specific time given.	This is an important subject but many students are shy. Teachers need more time to plan this especially or content subjects.
Q8 Explain the scale of differentiation as a classroom strategy.	No specific time given.	An important subject but many teachers don't know how to do this, classes are too big, experts are needed to teach it & teachers spend most time teaching basic grammar.
Teachers professional development		
Q9 What teacher development plans do your teacher have?	Twice a year.	All teachers are required to attend seminars in or out of school.
Q10 Explain how you monitor the your teachers for the content subjects.	Two times per semester.	This is done by senior teachers, using our own form.
Materials		
Q11 What teaching materials does the school provide for content teachers?	No specific time given.	We provide overhead projectors, computers, printers but teachers have to also design and make their own.

The interview results for content teachers

Q1. Do you ever integrate any language items in your class like vocabulary, grammar, critical thinking, reading or writing related to your subject? (Saint Joseph Bangna math teacher) only if there is time at the beginning of each monthly unit if students don't know the vocabulary but there is never enough time to do this. (Saint Joseph Bangna science teacher) it's rare to do this because there is never enough time in the schedule to allow for this. As for critical thinking again there is little time to plan and prepare this and it's difficult with only one teacher doing it. (Saint Joseph Bangna social studies teacher) there is quite a lot of vocabulary to teach so it's not that easy to find time in the schedule to teach all the vocabulary. Teachers need more critical thinking courses and training for this too.

Q2. Do you ever vary the kinds of instructional methods or activities in the class to cover for the different kinds of students with varying levels of abilities in your class and do you use any technology when teaching? (Saint Joseph Bangna math teacher) yes sometimes I try and vary the kinds of instruction, so I can set different examples to various students in the same class. The overhead projectors are used quite often especially when I start a new subject it allows students to see the whole sequence of events in a math problem from start to finish. (Saint Joseph Bangna science teacher) yes, sometimes I vary the instruction we have projectors and computers and I also take them to the library so it's something different. (Saint Joseph Bangna social

studies teacher) for me it's mostly lecturing, it's the only way to cover most of the material in a short space of time.

Q3. What kinds of exercises do you give the students in class and do you ever use vocabulary, grammar, reading comprehension, critical thinking as teaching points or are you only concerned with the main points of the subject? (Saint Joseph Bangna math teacher) the exercises I give are mainly ones that they can write in their note - books as this is the quickest and most efficient method to get the students to start doing the math problems. But there are times when I do give out math sheets as graphic organizers, it varies the kinds of instruction and helps some of the weaker students. I often check the grammar, and the English because they have to write explain a math problem and they arrived at a certain answer. (Saint Joseph Bangna science teacher) the exercises that I give are mostly whiteboard exercises, because it's often difficult to find just the right kind of exercise for that particular lesson. (Saint Joseph Bangna social studies teacher) its mostly reading and writing answers on the board, there is little time for vocabulary and grammar and the critical thinking is too much of a burden besides it's a difficult subject because and no-one teaches it directly.

Q4. Tell me about your main teaching styles, are they mostly lecturing? or do you like the students to get more involved? For example group work or student centered learning? (Saint Joseph Bangna math teacher) the teaching styles are often a mixture of lecturing styles and student interaction where I try and get the students to join in as much as possible by posing questions and giving feedback when I can. I also try and

arrange students in groups so that they can learn from each other especially when it's a complex problem. (Saint Joseph Bangna science teacher) yes mostly lecturing with some periods using projectors and computers and presentations too. (Saint Joseph Bangna social studies teacher) my style depends on the type of subject, if it's a slide show then I talk a lot but if its reading I ask the students to read individually, but mostly I do most of the talking because it's the easiest way to teach most of the materials in the schedule.

Q5. Is any lesson connected to the one before if so how is this done? (Saint Joseph Bangna math teacher) the nature of math is that there are times when one math theory and problem can relate to another more complex one and this is best taught in stages. So yes, there are times when certain lessons are connected to new ones. But at other times a math lesson can stand alone as one lesson without connecting it to other lessons. (Saint Joseph Bangna science teacher) sometimes if the subjects are connected then its possible but not always the books we use jump from one subject to another and so we I have to do the same. (Saint Joseph Bangna social studies teacher) I can do this in history but in other subjects like geography its not so easy because of the way the books are designed, it takes time to plan lessons that are connected and any free time I have between classes is spent on preparing on other lessons as I teach two subjects, English and social studies.

Q6. Do you collaborate with any other teacher to help you with your class in any way? (Saint Joseph Bangna math teacher) generally speaking there is not a lot of ''between teacher'' talk. There has been a little bit of collaboration this term, as we

had a seminar some months ago to start this but as yet, it's not a priority at the moment. (Saint Joseph Bangna science teacher) sometimes I coordinate with other teachers but it's only for when I have missed a class. (Saint Joseph Bangna social studies teacher) not really I teach some vocabulary when I can, but I leave it up to the students to do this.

Q7. Do you produce lesson plans and are they approved by anyone else? And in the lesson plans do you write or plan any subject and language objectives? (Saint Joseph Bangna math teacher) yes, all the teachers here have to produce lesson plans for all the lessons for each class. But they can be monthly lesson plans or unit plans. They have to be written in advance and e-mailed to administration for checking. We only have time to design content style lesson objectives. (Saint Joseph Bangna science teacher) yes all teachers who teach subjects and also English teachers have to make lesson plans for all the lessons they do. But lesson plans are a basic style, which means they have no real relation to what is actually done in the class on a daily basis. This is because there are factors that happen each week that are way out of the control of the teachers that affect what happens in the class on a daily basis. (Saint Joseph Bangna social studies teacher) yes they have to be sent to administration for checking before the start of the semester.

Q8. Do you ever relate lessons based on student's background knowledge? (Saint Joseph Bangna math teacher) only in the sense that I know what they already know from the previous math teachers but many forget. I spend most of the time teaching the structure of the math problem and try and build on the knowledge they have of

that alone. (Saint Joseph Bangna science teacher) it takes time to do this and because of the schedules I usually have to give homework to prepare the students for any theory that I plan to teach. (Saint Joseph Bangna social studies teacher) each week is a different part of the subject, and its only one hour per week so it's not easy to do this but its possible sometimes.

Q9. Do you ever develop or adapt any materials for your classes? For example do you ever re-write any materials to make them easier for students to understand? (Saint Joseph Bangna math teacher) I don't use much extra items except the course book and the whiteboard for math class, sometimes I use the overhead projector and other materials made by others but it's not often that I do that only when it is necessary. (Saint Joseph Bangna science teacher) sometimes I make something for a science class, but it takes too much time, the resources are although adequate there is no time to re-write materials of make new items especially when semester starts. (Saint Joseph Bangna social studies teacher) the social books were produced, by myself but after the semester starts there is no time to alter the text to suit each level.

Q10. What about teacher development? What kinds of teacher development have you completed? (Saint Joseph Bangna math teacher) I have a Masters degree from ABAC University but apart from that I normally attend the in-house seminars that are organized in the school. (Saint Joseph Bangna science teacher) we attend seminars throughout the year whenever they are available. (Saint Joseph Bangna social studies teacher) I mainly attend teacher seminars that are organized throughout the year in between semesters, and the odd times when they are arranged.

Interview Frequency Data for Saint Joseph Bangna School Math Teacher

curriculum integration		
questions	frequency	math teachers answers
Q1: Do you ever integrate any language items in your class like vocabulary, grammar, critical thinking, reading or writing related to your subject?	Not often, have done in the past.	Often too much vocabulary to teach and it takes up too much time.
Q2: Do you ever vary the kinds of instructional methods or activities in the class to cover for the different kinds of students with varying levels of abilities in your class and do you use any technology when teaching?	Sometimes	Instruction varies little between overhead projectors, lecturing, and worksheets.
academic language		
Q3: What kinds of exercises do you give the students in class and do you ever use vocabulary, grammar, reading comprehension, critical thinking as teaching points or are you only concerned with the main content?	Daily whiteboard exercises.	Reading and writing activities on the board sometimes give sheets.
Q4: Tell me about your main teaching styles, are they mostly lecturing? where you stand and tell or do you like the students to get more involved?	Often lecturing styles.	Mostly lecturing styles using the whiteboard & workbooks, overhead projector.
Q5: Is any lesson connected to the one before if so how is this done?	Sometimes	Its not easy doing this time constraints prohibit better planning.
communications		
Q6: Do you collaborate with any other teacher to help you with your class?	Not often.	Everyone is too concerned with their own subject. Not enough time for formal meetings.
cooperation		
Q7: Do you produce lesson plans and are they approved by anyone else?	Before the semester.	All teachers have to produce lesson plans for all subjects.
Q8: Do you ever relate lessons based on student's background knowledge?	Sometimes	Not easy to do this, the curriculum has too many subjects to cover each semester.
materials		
Q9: Do you ever develop or adapt any materials for your classes?	Sometimes	Not often because of time constraints
teachers professional development		
Q10: What about teacher development?	Twice a year.	Seminars mostly, as there is little else.

Interview Frequency Data for Saint Joseph Bangna School Science Teacher

curriculum integration		
questions	frequency	answers
Q1 Do you ever integrate any language items in your class like vocabulary, grammar, critical thinking, reading or writing related to your subject?	Rarely do this.	Time constraints prohibit the time needed to do this.
Q2 Do you ever vary the kinds of instructional methods or activities in the class to cover for the different kinds of students with varying levels of abilities in your class and do you use any technology when teaching?	Sometimes	There are variations in the delivery of the lessons depending on various levels.
academic language		
Q3 What kinds of exercises do you give the students in class and do you ever use vocabulary, grammar, reading comprehension, critical thinking as teaching points or are you only concerned with the main content?	Sometimes	Most common kind of exercises are worksheets, but not all the time.
Q4 Tell me about your main teaching styles, are they mostly lecturing? where you stand and tell or do you like the students to get more involved?	Mostly	Its mostly a lecturing style with some presentations by students but they are short.
Q5 Is any lesson connected to the one before if so how is this done?	Sometimes	But only if the subjects from the curriculum are connected.
communications		
Q6 Do you collaborate with any other teacher to help you with your class in any way?	Rarely	Only when a class has been missed.
cooperation		
Q7 Do you produce lesson plans and are they approved by anyone else?	Twice annually.	All teachers have to write annual lesson plans.
Q8 Do you ever relate lessons based on student's background knowledge?	Not usually.	There is no time.
materials		
Q9 Do you ever develop or adapt any materials for your classes?	Not often.	Time constraints prohibit the planning of this.
teachers professional development		
Q10 What about teacher development?	Once / twice a year.	In house seminars are the usual method for this.

Interview Frequency Data for Saint Joseph Bangna School Social Studies Teacher

curriculum integration		
questions	frequency	answers
Q1 Do you ever integrate any language items in your class like vocabulary, grammar, critical thinking, reading or writing related to your subject?	Not often.	There is a lot of vocabulary to & not enough time in the curriculum to teach it to all the classes.
Q2 Do you ever vary the kinds of instructional methods or activities in the class to cover for the different kinds of students with varying levels of abilities in your class and do you use any technology when teaching?	Not often.	Its mostly lecturing because of the amount of and nature of the subjects and lecturing covers a lot of material in the few lessons that are given.
academic language		
Q3 What kinds of exercises do you give the students class & do you ever use vocabulary, grammar, reading comprehension, critical thinking as teaching points? or are you only concerned with the main content?	Often	Reading and writing from exercises from the whiteboard. Critical thinking is complex and there is never sufficient time to plan it to fit the materials.
Q4 Tell me about your main teaching styles, are they mostly lecturing? where you stand and tell or do you like the students to get more involved?	Mostly	Power point shows mean teachers have to talk a lot and students just listen.
Q5 Is any lesson connected to the one before if so how is this done?	Not often.	This can be done with limited subjects because of the nature of them. Time constraints are another problem in planning lessons.
communications		
Q6 Do you collaborate with any other teacher to help you with your class in any way?	Not often.	All teachers teach their own subjects and vocabulary is taught as and when is possible.
cooperation		
Q7 Do you produce lesson plans and are they approved by anyone else?	Twice yearly.	All teachers have to produce lesson plans for all their subjects.
Q8 Do you ever relate lessons based on student's background knowledge?		
materials		
Q9 Do you ever develop or adapt any materials for your classes?	Few	Text books designed by the teacher, after semester starts there is no time to alter text to suit.
teachers professional development		
Q10 What about teacher development?	Twice yearly.	We have seminars twice a year.

APPENDIX J

Validation process and executive summery: for the validation group.

A sample letter to the experts to validate the model.

Home:
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Saint Joseph Bangna School
75 Moo 9, Sukhumvit 107 Road,
Samrong Nuea, Amphoe Mueang
Samutprakan Bangkok, 10270

Date:

To:

Reference: Validation of teaching model

Dear

I am Robert McBain, and I am currently studying at Assumption University in Bangkok for my Ph.D. in Educational leadership (curriculum and instruction). I teach Social Studies to Grade 7-12 and English to Grade 8 at Saint Joseph Bangna School.

I have been advised, by the committee at Assumption University, that as part of my studies, I should ask key personnel in the teaching profession to validate the enclosed teaching model that I have devised for teaching language and content studies like math, science and social studies. If you consider the elements of this theoretical model to be appropriate please be so kind as to confirm this by signing or scanning your signature on the space below. I would also ask that if you would like to make any suggestions to the enclosed model please feel free to write any comments you wish.

I would like to thank you for validating this as it counts as one of the final stages in my graduation.

Thank you in anticipation.

Yours truly,

Mr. Robert A. Mcbain

GRADUATE SCHOOL OF EDUCATION
MODEL VALIDATION APPROVAL FORM

Student Name: Robert Mcbain

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Dissertation Title: A Model for Content and Language Integrated Learning for English Programs in Saint Paul de Chartres Schools in Thailand

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MODEL VALIDATION APPROVAL

Do you approve of this model?

☐ Yes I ---------- have read and approve this model for content language English programs at Saint Paul de Chartres Schools. My comments, reservations suggestions are listed below.

☐ No I ---------- have read and cannot approve this model. I conform that this model is not appropriate to be applied to English programs at Saint Paul de Chartres Schools. My comments, reservations, suggestions are noted below.

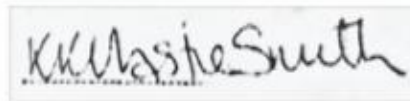
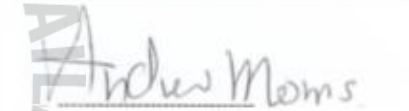
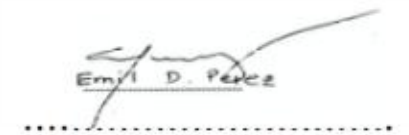
Comments / reservations / suggestions:

Signature

Executive Summary for the Focus Group
1. Academic language Teachers apply methods related to teaching and integrating vocabulary, grammar, reading and writing in a content class. Firstly the language teacher teaches these elements before the content teacher teaches the subject. Therefore the students are pre-loaded with vocabulary, grammar, reading & writing prior to the content teacher teaching the content.
2. Communication Collaboration Strategies Communication is vital between administration & teachers. But it is also important between all teachers especially those who teach content (math, science & social studies) and language teachers so that they can work together as a team.
3. Materials Materials are assessed initially before content and language are taught. They are also updated and graded applicable to students level. The core texts for content studies should also be adapted or graded according to the student's levels.
4. Cooperative Teaching Strategies Language and content teachers cooperate and teach as part of a team. Students also learn using cooperative learning strategies in the class.
5. Differentiation Both language and content teachers use differentiated methods as routine methods to reach out to the various levels in the class. Teachers also study this as part of their on-going professional development.
6. Curriculum Integration School administration and teachers design and update a content-based curriculum, where the focus of studies is based on content subjects. The English language teaching is integrated and drawn from these subjects along with other conversation style classes.
7. Questioning and Cuing Strategies Content teachers plan structured and semi structures questions for content and language objectives across the curriculum. Both teachers plan for critical thinking objectives that includes questioning strategies and differentiation in an ESL class. Teachers are also given sufficient time between classes to plan forthcoming lessons.

8. Critical Thinking Both language and content teachers use critical thinking methods in the class that is appropriate to their subject as a routine (Blooms revised taxonomy). Teachers also study this as part of their on-going professional development.
Description of the model As you can see there are 8 parts of the model and I have written a brief summary for each one. Each part has been the result of a content analysis study where I have researched books and documents to record, which themes appear most prominent. The term content for this model refers to math, science and social studies only, however other subjects would also be taught.

Validity Focus Group Experts			
No	Name	Position	Signature
1.	Sister Valentine	Administrator Saint Joseph Bangna School Bangkok	.....
2.	Sister Dominic	Administrator Saint Francis Xavier School Bangkok	.....
3.	Sister Atchara	Administrator Saint Joseph Silom School Bangkok	.....
4.	Ms. Chantana Hongwanusrunya	Head of EP Saint Joseph Bangna School Bangkok	.....
5.	Mr. Tim Cassidy	English language teacher Saint Joseph Bangna School Bangkok	.....
6.	Mr. Tam McPadden	English language teacher Coventry University U.K.	.....
7.	Mr. Earl Armstrong	English teacher Srivikorn School Bangkok	.....
8.	Mr. Andrew Charles	Lecturer Mahidol University Bangkok	.....
9.	Mr. Jeff Czuba	Academic Coordinator Thai Japanese International School Bangkok	.....

11.	Ms. Kirsty Haistie Smith	Teacher New Sathorn International School Bangkok	 .....
12.	Mr. Joe Calveti	Teacher Singapore International School Bangkok	 .....
13.	Mr. Andrew Morris	Head Teacher Inlingua School Thailand Bangkok	 .....
14.	Mr. Richard C. Haugh	English Language Educator Kaohsiung Taiwan	 .....
15.	Mr. Steven Sharpe	Chemistry teacher Saint Joseph Bangna school	 .....
16.	Mr. Claas Lidner	Head of English Saint Joseph Bangna School	 .....
17.	Mr. Emil Perez	Head of Math Saint Joseph Bangna school Bangkok	 .....
18.	Mr. Heiko Seifert	Science teacher Saint Joseph Tipawan School Bangkok	 .....
19.	Mrs. Vicky Jamaca	Math teacher Saint Joseph Bangna School Bangkok	 .....
		Math teacher NIVA	