RESEARCH ON ENGLISH ACROSS CURRICULUM: AN OVERVIEW OF WHAT WE INVESTIGATE AND HOW

Agustinus Ngadiman[1]

Abstract.

This paper is an overview of empirical studies on language across curriculum. The emphasis of the review is on the 'what' and 'how. The 'what' deals with the research areas and purposes. The 'how' deals with the approach and technique, setting and participants to set out the research. The purpose of the discussion that follows is to help us see what has been studied and how it has been researched. These discussions should help content and language specialists identify the range of factors related to English across the curriculum. The purpose of this paper is two-folds: to present important research model in English across curriculum and to suggest how insights from theory and research can be introduced in the classroom.

Key words: Language across curriculum, research areas, approach, research methodology

Historical Background

The concept of 'language across the curriculum (LAC)' has given strong impetus in Britain by the publication of the influential Bullock Report (A language for life) in 1975, whose implications for language learning have been worked out in nearly four decades of practice since then (Honey, 1985). Bullock's Report "A language for life", specifically the chapters regarding 'Language Across the Curriculum', has provided guidance and focus for English specialist and curriculum planners to move in the same direction - i.e. to emphasize the central role language in education of every stage of a student's career – from primary to tertiary (Lee, 1985). The ideas about language and learning which form the intellectual basis of the "language across the curriculum" movement are in fact drawn from perspective on human development and knowledge that have emerged in fields of psychology, anthropology, philosophy, sociology, and linguistic perspectives which see knowledge as the product of a complex between each person and what he or she observes and reads (Parker, 1985). For practical poses, however, this movement began in London in 1966 when a group of secondary English teachers met to

---

[1] Agustinus Ngadiman *adalah* Dosen Program Studi Pendidikan Bahasa Inggris di FKIP Universitas Katolik Widya Mandala Surabaya

consider the role of talk in English lesson. They wanted to know more about how discussion might be best done for learning. Soon, their focus expanded to include discussion on a wider range of issues, theoretical as well as practical. They found themselves discussing the relationship between language and thought, how language represented experience, the function of language and society, different field of language and how they were acquired, the difference between talking and writing, the nature of discussion and group dynamics (Parker, 1976). They also found that it was 'impossible to confine their study to English alone". When teacher of science of other subjects joined the discussion, they began to talk about "language and education', or 'language and learning', and finally about 'language across the curriculum.' They found that language was a matter of concern for everyone. If children were to make sense of their school experience, and in the process to become confident users of language, then the teachers needed to engage in a much closer scrutiny of the way in which students encountered and used language throughout the school day (Barners, et. al, 1971).

Ten years after Bullock's Report (A language for life and the chapters "Language Across the Curriculum" in 1975, a prestigious conference was held in RELC, Singapore in 1985. Educators, English specialists and content teachers from different language contexts, English as a native language (EL1), as a second language (ESL) and as a foreign language (EFL) met to discuss and review the relevance as well as the application of the idea of Language across the curriculum. Research reports on Language across the curriculum (English for mathematics, English for physics, English for Science and other subjects, were presented. New ideas and models teaching language across curriculum, such as teaching language through content and teaching contents through language (especially English), such as increasing listening skills across the curriculum (Mary Underwood), the application of an integrated model for language across the curriculum (Bernard Mohan), personalizing learning through writing and responding (Nea Stewart-Dore), authentic listening materials and the language of problem-solving (Willis and Willis) were also introduced.

Whilst English specialists and teachers had in the past studied and written much about the teaching of languages, especially English as a second or foreign language, they had seldom considered the role of English (or any language) in relation to the other content subjects in the curriculum. English was treated purely as a subject in the curriculum, and although content subjects were taught in English, they were simply compartmentalized as individual subjects in the time-table (Cheong, 1985). English language teachers found themselves as isolated individuals, having little to do with history or science teachers. What happens to day might be still the same? Some English specialists and teachers still have the same

views about language (English) and its relation to other subjects. They still purely treat language (English) as an individual subject in the curriculum. Both language and content teachers are still in their own individual views. There is little interdisciplinary communication, each content subject teacher jealously guarding its sphere of influence. There is much "politics of the curriculum", but little integration of interest.

Teachers of any subjects have to realize what it means by literate and illiterate. What it means by illiterate in the new millennium has expanded dramatically (Bean, 2000). We have moved beyond the view that literacy is the ability to read and write. According to Bean (2000), "in the not distant in the past being literate in content fields meant being able to read and comprehend texts in history, science, mathematics, literature study, and other academic disciplines." Bean further said that content literacy is a cognitive and social practice involving the ability to read and write about multiple forms of print. These multiple forms of print include textbooks, novels, magazine, internet materials and other socio-technical sign systems conveying information, emotional content, and ideas to be considered from critical stance.

For many years, the English language has served a variety of purposes in almost every corner of the world. Its role has evolved into an instrument of change in a new context, which is propelled by the maturing of information age, supported by a sophisticated infrastructure for electronic communication. The evolution is also propelled by a more open way of thinking about knowledge and our responsibility to broaden participation in the construction of such repository of content. The ease with which we can communicate across geographical areas also encourages a more attitude about sharing, learning and teaching. Within this context, the English language has emerged as a medium of communication for many regardless of country of origin or native language. The English profession is therefore faced with an unprecedented challenge in fulfilling its responsibility in equipping students with language proficiency to support new educational opportunities made available. As Greenwood (1985) has suggested, English teachers have a vital role to play by bringing together the three aspects: (1) school subjects, (2) language across the curriculum, and (3) study skills, i.e. using school subjects as the content of language lesson. As a result of the evolution of the role of the English language, the idea of English across curriculum (LAC)' has been widely applied in a variety of school subjects and new terms, such as English Across Curriculum (EAC), Content and Language Integrated Learning (CLIL), English in Content Area, Writing Across the Curriculum (WAC), Writing to Learns (WTL), Writing in the Discipline (WID) are coin aged. This idea is widely spread and applied not only in Britain where English is the mother tongue but in the countries where English is the second language or even a foreign language. In line with the concept of "English for Life", English is

then used as a medium of instruction for content subjects, such as mathematics, physics, geography and laws.

The demand for teachers to deliver a variety of content subjects in English is then challenging. They are faced with two intellectual domains, language and content subjects, which are quite problematic. When language teachers have to teach content subjects they may not be well informed with the content. Likewise, when content teachers have to teach the content in English they may get problems with the language. As with the schools, Universities and colleges ought to be concerned with this issue of language across the curriculum, especially if one particular language (English) is used as the medium of instruction. The problem is perhaps less pronounced in universities or schools where the native language is also the medium of instruction, as in Japanese, Thai and Indonesia.

With Bullock's Report 'A language for life and Banner's 'discussion Document, educationists, both language and content teachers began to do surveys and look for answers by researching and examining case studies in the field of 'language across the curriculum (Lee, 1985). Barnes (1971) might be the first person who did an educational research on language whose aim was to find answers to the most important question in 'language across the curriculum: what can we learn about learning by looking at the language of our classrooms? To get well informed with what has happened with the application of the idea "English across curriculum", this paper is an overview of empirical studies on language across curriculum. The emphasis of the review is on the 'what' and 'how. The 'what' deals with the research areas and purposes. The 'how' deals with the approach and technique, setting and participants to set out the research. The purpose of the discussion that follows is to help us see what has been studied and how it has been researched. These discussions should help content and language specialists identify the range of factors related to English across the curriculum.

Research Areas and Purposes

There are two main components of a research: process and product (Nunan, 1992: 2). The process is about an area of inquiry and how it is pursuit. It involves gathering information, categorization, analysis, and interpretation to see to what extent the initial objective has been achieved. The product of a research is knowledge generated from the process as well as the initial area to be presented. A research is done for a variety of purposes, to solve problems, to verify the application of theories, to enlighten both researcher and any interested readers, to prove or disprove new or existing ideas, etc. The primary purpose of research is to explain natural phenomena, to understand the relationships that underlie these phenomena and then to predict and influence behavior as a result. For example, we can use educational research to explain why some teaching

techniques are more effective than others. The explanation leads to a knowledge base that a novice teacher can use to become more effective (Macmillan, 1990: 4).

Based on the research report selected, though rather difficult to categorize, the research areas on English across the curriculum can be categorized into: (a) instructional materials, (b) teaching (reading and writing) strategies, (c) student writing, (d) classroom interaction, (f) assessment, (g) assessment, (h) vocabulary.

(a) Research on Instructional materials. The studies included in this categories are those that deal with (a) material adaptation as conducted by Pat Moore and Fransisco Lorenzo (2007), (b) text readability by Nababan (1985), (c) language problems by Suxhart Ratunakul (1985), Erlinda C Salera 1985, (d) adapting authentic materials for CLIL Classroom (Pat Moore and Fransisco Lorenzo (2007), and (e) materials compatibility between language contexts and subject textbooks as it was done by V Sasikumar (1985). Table 1 below exemplifies studies on instructional materials.

Table 1. Foci and Purposes of Instructional Materials Research

Researchers	Foci	Purpose/question
Debie, Margaret (2006)	Developing writing materials through reading, talking and writing	To develop writing materials
Erlinda C Salera (1985)	English and Math instructional materials in the lower primary	To analyze the contents of the new and old textbooks and teachers' manuals used in elementary schools
V sasikumar (1985)	Compatibility of language contexts and subject textbooks	To find out how far the language content of the English course book in use is compatible with the language content of the subject treatment in English
K Rosemary (1985)	Compatibility of language use across the curriculum in school level textbooks	To estimate the compatibility of language use across of school textbooks
Florence I Davis (1985)	Teacher awareness of the language of textbooks across the curriculum	To show the teacher awareness of the language of textbook

Researchers	Foci	Purpose/question
Bill Robins (1985)	Materials adaptation for Communication engineers	To dewlap course materials
Nababan, 1985	Readability of Text book	To realize the effectiveness of textbook
Suxhart Ratunakul 1985	Language problem across the school mathematics curriculum in Thailand	To explore the impact of language interpreting and understanding mathematical concepts
Pat Moore and Fransisco Lorenzo (2007)	Adapting Authentic Materials for CLIL classroom	To adapt authentic materials for CLIL classroom

(b) Research on Teaching-learning Strategies. The focus included in this category are (1) to investigate the effectiveness of teaching techniques such as done by K Clhallapan (1985), Robert William Health (1985), NG Seok Moi (1985), Vee Harris (2005) Vee Hrris (2006), Rick De Graaf, Gerrit Jan Koopman and Gerad Westhoff (2007), Julia Huttner and Angelika Rieder-Bunemann (2007), Regina Nunez Perucha and Emma Dafouz Milne (2007), Betsy A. Otalora (2009), and (b) to evaluate the implementation of a policy, as exemplified in table 2 below.

Table 2. Foci and Purposes of Research on Teaching-learning Strategies

Researchers	Foci	Purposes
K Cihallapan (1985)	Language through science and science through language	To study the interdependence of linguistic and conceptual structures and skills in science
Robert William Health (1985)	Teaching information sequence scientific writing	To determine the effects of teaching information sequence scientific writing to Primary ESL pupils
NG Seok Moi (1985)	Effectiveness of integrative approach to teaching reading and language	To determine the effectiveness of integrative approach to teaching reading and language to lower primary school

Researchers	Foci	Purposes
Meltzer and Hamann (2004)	Teaching learning strategies	To know which instructional strategies dovetail in both ELL adolescent and non-ELL literary literatures
Vee Harris (2005)	Language learning strategies: Government policy and school practice	To evaluate to implementation of government policy
Rick De Graaf, Gerrit Jan Koopman and Gerad Westhoff (2007)	Effectiveness of L2 Pedagogy in Content and Language Integrated Learning	To identify the Effectiveness of integrating content and language learning in L2
Julia Huttner and Angelika Rieder-Bunemann (2007)	The Effect of CLIL instruction on Children's Narrative Competence	To know the Effectiveness of CLIL instruction
Regina Nunez Perucha and Emma Dafouz Milne (2007)	Lecturing a foreign language in a CLIL University context	To know the implication of Lecturing the foreign language in a CLIL University context
	Effectiveness of Argumentative-Driven Inquiry (ADI) as an instructional model	To determine the effectiveness of Argumentative-Driven Inquiry (ADI)
Betsy A. Otalora (2009)	Learning strategies	To answer the questions: which learning strategies can teachers of content courses use to deliver content in another language in order to successfully impact learning?
Cosntance Cerniglia and Karen Medsker (1990)	Improving coherence by using computer-assisted Instruction	To help students improve their writing ability
	Content-based teaching	To evaluate the implementtation of a teaching approach (task-based)

(c) Research on Reading. Research on reading across curriculum or content area fall roughly into the following topics (a) comprehension ability by the learners as done by Marohaini Yusuf (1985), Michael Bennet, David M. Wark (1985), (b) effects of vocabulary on reading (Agnes Lan Sun-Ling (1985), and (c) teaching reading strategies

Table 3. Foci and Purposes of Research on Reading

Researchers	Foci	Purposes
Wlseman, Hartwell, and Hannafin (1980)	Reading and listening skills of secondary Mildly Handicapped students	To explore the reading and listening skills of secondary mildly handicapped students
Agnes Lan Sun-Ling (1985)	Effects of vocabulary on reading comprehension	To know whether content words aid a reader's comprehension more than function words
Marohaini Yusoff 1985	Reading and writing tasks	What kinds of writing and reading do first year university students undertake in the course of their studies? What major problems do they find in reading and writing in English and Bahasa Malaysia
Michael Bennet, David M. Wark (1985)	Literary versus Scientific Reading in College – A comparative Analysis	To know whether science majors read scientific more effectively than literary materials,

(d) Research on Writing. The foci of research writing of English across the curriculum are: (a) teaching methodology, (b) text analysis on various levels (discourse level, sentence level, or lexical level), (c) students' writing. As illustrated in Table 4 below

Table 4. Foci and Purposes of Research on Writing

Researchers	Foci	Purposes
Susan Parks (2000)	Employees' professional' writing competence	To know how incidental collaboration played a significant role in enabling nurses to appropriate genre-specific language
Swales, John (1990)	Global coherence and lexical management	

Researchers	Foci	Purposes
Monica Barnengen (2010)	Effects of writing on Standardized tests	To know the effects of writing on Standardized tests
Gholam Reza Zarei and Sara Mansoori (2007)	Metadiscourse in Academic Prose.	Metadiscourse in Academic Prose. Contrastive analysis of English and Persian Research Articles
Christina Ackerl (2007)	Errors of Lexico-Grammar in the Essays of CLIL and non-CLIL Students	Lexico-Grammar in the Essays of CLIL and non-CLIL Students: Error Analysis of Written Production

(e) **Research classroom interaction.** Studies included in this category are those that examine (a) Communication acts and strategies by Rosario Marminta (1985), and (b) Speaking English for Academic Purposes by JIN Yan Hua (2007)

Table 5. Foci and Purposes of Research on Classroom Interaction.

Researchers	Foci	Purposes
Rosario Marminta (1985)	Communication acts and strategies.	To analyze and describe the communication acts and strategies employed by effectiveness in teaching concepts and to identify the linguistic forms corresponding to these functions and strategies.
JIN Yan Hua (2007)	Speaking English for Academic Purposes	To investigate the difficulties in speaking English for Academic Purposes

(f) **Research on assessment.** Based on the research reports selected the focus of this research area are: (a) Direct assessment of composition (Edward W. Wolf and Jonathan R. Manalo (2004), (b) Assessment mode in CLIL Eva Poisel (2007), (c) Content assessment for English Language Learners (Anne Katz, Patricia Low, Jim Stack, and Sau-Lim Tsang (204)

Table 6. Foci and Purposes of Research on assessment

Researchers	Foci	Purposes
Edward W. Wolf and Jonathan R. Manalo (2004)	Direct assessment of composition	To determine whether performance on a direct writing assessment is comparable for examinees when given the choice to compose essays in handwriting versus word processing.
Eva Poisel (2007)	Assessment mode in CLIL	Assessment mode in CLIL to enhance language profanely and integrated sills
Anne Katz, Patricia Low, Jim Stack, and Sau-Lim Tsang (2004)	Content assessment for English Language Learners	To determine at what point educators can regain confidence in the results of standardized tests conducted with English language learners?
Dillon (2004	Test on social studies	To examine if state assessments fair to English language learners

(g) **Vocabulary.** There are only a few of research reports found in this area. The research focus in this research area as found in table 8 are (a) different retention between technical, general vocabulary (Ali Juhamgard (2007), (b) effects of vocabulary on reading comprehension (Agnes Lan Sun-Ling (1985), and (c) Vocabulary and discourse styles (Ronald a carter (1985)

Table 8. Foci and Purposes of Research on Vocabulary

Researchers	Foci	Purposes
Rosario Marminta (1985)	Forms and function in venture in science and mathematics.	To analyze and describe the communication acts and strategies employed by effectiveness in teaching concepts and to identify the linguistic forms corresponding to these functions and strategies.
Ali Juhamgard (2007)	Which word Types (technical or general) are	To know which word Types (technical or general) are more difficult

Researchers	Foci	Purposes
	more difficult to retain by the Iranian High School Learners	to retain by the Iranian High School Learners
Ronald a carter(1985)	Vocabulary and discourse styles	To explore the different kinds of lexical relations in different discourse
Agnes Lan Sun-Ling (1985)	Effects of vocabulary on reading comprehension	To know whether content words aid a reader's comprehension more than function words

Approaches (methodologies) and Techniques (methods) of Research

The key aspect of any research used to set up the study and collect the data under study is the approach or methodology. Platridge and Starfield (2007:118-119) differentiate between the term methodology and methods. According to them and other experts, methodology refers to the theoretical paradigm or framework in which a researcher is working; for example, choosing a quantitative or qualitative paradigm and the argument that is built in the text to justify these assumptions, theoretical frameworks and/or approaches as well as the choice of research questions or hypothesis. The methodology develops an explanation as to why the research methods under discussions have been chosen. The term method(s) refers to the actual research instrument and materials used. Platridge and Starfield (2007:119). According to Platridge and Starfield (2007: 119) the chosen methodology informs the choice of methods and what counts as data. For example, interviews, participant observation and discourse analysis are methods commonly used in qualitative research, whereas in quantitative research the methods and materials used in laboratory or other experimental setting will require detailed description. The writer needs to discuss why a particular method was selected and not others. The writer should refer to the literature on the method(s) under review and justify their choice using the literature. The justification should revolve around the intrinsic value of the research method(s) chosen in terms of yielding the data to answer the research questions but could also address issues like limited time, the fact that it is a preliminary study, financial constraints.

There are seven categories of approach that are commonly used in educational research and that are typically used in research on English across the curriculum. A brief explanation of each approach of the categories is given below.

1. **Experimental.** There are two essential characteristics of all experimental research, direct manipulation of the independent variable

and control of extraneous variables. Direct manipulation of variables means that the investigator has direct control of when the subject receives the independent variable and how much of it each subject receives. Controlling the extraneous variables means that the investigator keeps constant for all subjects, all variables, all conditions and procedures, except the independent variables. In addition to those characteristics, the key test of an experimental research is to provide results that can be generalized and replicated by other researchers. An example of an experimental research in English across curriculum would be two different teaching techniques. One group (the control group) receives a certain teaching technique which is different from the techniques received by the group (the control group). After the instruction (treatment) is over, both groups are tested to know whether the technique given in the control group gives different effect(s) or not.

2. **Correlational**. Correlational studies investigate the degree to which variations or differences in one variable are related to variations in different variables. According to Macmillan, 1992: 147) relationship are important in our understanding of teaching and learning and schooling for several reasons. First, relationship allows us to make preliminary identification of possible causes of students' achievement, teachers' performance, and other important educational outcomes. Second relationship helps us identify variables that may have to be investigated further. Third, relationship allows to predict the value of one variable from the value of other variables. An example of correlational study employed in English across the curriculum would be a study that examinees the relationship between language proficiency and content mastery.

3. **Survey.** In a survey, the investigator selects a group of respondents, collects information, and then analyzes the information to answer the research question. Survey research obtains answers from a large number of the population in order to describe some characteristics of the population. An example of research in English across culture is "Language Problems across the school mathematics curriculum in Thailand" by Suchart Ratanakul, 1985)

4. **Qualitative**. A qualitative research stresses a phenomenological model in which reality is rooted in the perception of the subjects. Generally qualitative research attempts to explore individuals in their natural setting by using different sources of data or method of data collection. The focus of a qualitative research is understanding meaning through verbal narratives and observations rather than through numbers. A qualitative research usually takes place in naturally occurring situations.

5. **Evaluation research**. An evaluation research is directed towards making decisions about the effectiveness undesirability of a program.

The purpose is to make judgment about alternatives in decision-making situations. In most cases evaluation research is focused on a specific location or type of program. This approach can be implemented in to evaluate a new program, for examples: (1) the implementation of teaching mathematics in English, (2) the implementation of a new program, (3) the implementation government policy in implementing state exam.   In general, the findings of a qualitative research provide a more holistic picture of the phenomena being studied than the quantitative approach.   Within qualitative research an investigator may use a wide variety of techniques including interview, observation, or document analysis. Another characteristic of a qualitative research is that its result cannot be generalized. An example of a qualitative research in English across the curriculum would be one in which a content teacher is observed and interviewed periodically for an entire term of teaching and various documents are collected and analyzed. The research write-up then attempts to provide portrait of the content teacher's decision making processes.

6. **Action research**. An action research a specific research in which the purposes is to solve a specific classroom problem or make decision of a single local site. The goal is to improve practices immediately. Teachers are often involved in this kind of research because it is very useful and can be easily conducted within their capabilities and data availability. The following topics may appropriate to employ this approach. (1) Employing Direct Reading Thinking Activity (DRTA) to improve students' critical thinking, (2) introducing mathematical concepts before reading math problems.

7. **Ex-post facto**. An ex-post facto design is similar with both an experimental and correlational studies. Like in an experimental study, in an ex-post facto there is a typically "a treatment" and /or "comparison." groups and the results are analyzed using a statistical procedure. What makes an experimental design and an ex-post facto different from an experiment design is that in ex-post facto there is no manipulation of the independent variable because it has already occurred, but the comparison of group differences on the dependent variable is the same. Like correlational study, there is no manipulation of the independent variable, so technically correlational and ex-post facto are not experimental. This approach can be used in the studies such as (1) the effect of language aptitude on content proficiency, (2) the impact of bilingual education on cognitive maturity.

Based on the research reports selected for this paper it is detected that most of the studies employed the qualitative approach, especially case study. The approaches and techniques employed in the studies of English across the curriculum depend on the aims of the study. Studies that investigate the teaching-learning strategies employ either qualitative or

quantitative (experimental) or mix quantitative and qualitative, and action research design, making use of observation and interview to collect the data. Statistical analysis is used to determine the difference effects. Those which attempt to investigate the effectiveness of a single teaching technique use an action research. In this study two techniques are compared. In studying the learners' memory for the retention of technical and general vocabulary, studies which attempt to investigate classroom interaction, such as speaking and language problems made use of qualitative approach with variety of instruments used. Studies on instructional materials employed qualitative approach and text analysis with a variety of instruments used. Table 8 illustrates the approaches and instruments used in the study.

Table 8. Approaches and methods employed in the study

Research areas	Specific Focus	Approaches	Methods	Participants	Settings
Instructional materials	Materials adaptation	Qualitative	Observation, Text analysis	Primary and tertiary	ESL
	Readability of Text book	Qualitative	Text analysis	Primary and secondary	ESL, EFL
	Language problem	Qualitative	Observation, Text analysis	Primary	EFL
Teaching-learning strategies	Effectiveness of teaching technique	Experimental ,Action research, Qualitative, Case study	Observation , Interview	Primary, secondary	ESL, EL1
	Developing instructional model	Experimental, Qualitative	Observation	Primary and secondary	EL1, ESL
Reading	Vocabulary and reading comprehension	Case study, cause-effect	Observation	Primary, secondary and tertiary	EL1, ESL
	Reading and writing	Case study, correlational	Observation Test	Primary, secondary and tertiary	EFL
Writing	Students texts	Qualitative	Text analysis	Primary, secondary, tertiary	EL1, ESL

Research areas	Specific Focus	Approaches	Methods	Participants	Settings
	Meta discourse, rhetoric, error analysis	Qualitative	Text analysis	Primary, secondary, and tertiary	EL1, ESL, EFL
	Effects of writing on test	Case	Observation, test	Secondary	ESL
Vocabulary	Vocabulary retention	Comparative study	Test	ESP tertiary level	ESL, EFL
	Effects of technical terms	Cause-effect	Observation	Primary, secondary and tertiary	ESL, EFL
	Effects of vocabulary on reading	Cause-effect	Observation	Primary and secondary	ESL, EFL
Assessment	Assessment mode in CLIL	Case study	Test, observation	Primary, secondary, tertiary	ESL, EFL, EL1
Classroom interaction (speaking)	Problems in speaking English	Case study	observation	Primary, secondary, tertiary	EFL, EL1
	communication acts and strategies	Qualitative, Case study	Observation	Tertiary	EFL, ESL

Final Remark

The most important to be drawn from this overview is that the wide scope of the study English across the curriculum: what they investigated are related to teaching learning process, the approach: varies depending on the purpose, mostly are qualitative. The setting: are mostly in English and the first language and the second language and only a few in English as a Foreign language. The participants of the studies are primary, tertiary, secondary levels of students.

In Indonesian context, where the status of English is as a Foreign language, research on English across curriculum has been started. Though not many research on its application has been published, many of us have realized that problems encountered by teachers and students in the application of English across curriculum in Indonesia. our students are still struggling for their English as well for their math and science subjects or other contents subjects. Many teachers still believe that the proper language to teach content subjects such as math and physics is their home language.

To get picture of the effectiveness of English across curriculum in Indonesia, before the situation becomes worse, more research should be done. We may observe the attitude of the headmaster, parents, students of English across the curriculum, the supports the government provide for the implementation of English across the curriculum, the availability of instructional materials, the readability of the instructional materials, what extent is the language contents of English course books compatible, Teachers' language proficiency, the language problems encountered by content teachers in delivering teaching materials in English and the problems encountered by English specialists when delivering content subjects, the problems students encounter when the content is delivered in English, and when they have to communicate content subject in English. And there are many more angels that we can look to overcome the problems of teaching English across curriculum. In Indonesia.

References

Agnes Lan Sun-Ling (1985). Effects of vocabulary on reading comprehension. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Agnes Lan Sun-Ling (1985). Towards A Model of ESL Reading Comprehension: Vocabulary and other Considerations. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Ackerl, Christina (2007) Errors of Lexico-Grammar in the Essays of CLIL and non-CLIL Students

Ali Johangard. 2007. Which word types (technical or general) are more difficult to retain by Iranian High school Learners.

Anne Katz, Patricia Low, Jim Stack, and Sau-Lim Tsang (2004) Content assessment for English Language Learners

Barnengen, Monica (2010) Effects of writing on Standardized tests

Barron, Colin S. 1985. Concepts, culture and communication in Architecture. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Bean, Thomas W. 2000. *An Update on Reading in the Content Areas: Social Instructional Dimension.* http://www.readingonline.org/articles/handbook/bean/index.html 4/19/2010

Bennet, Michael, David M. Wark (1985) Literary versus Scientific Reading in College – A comparative Analysis Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Brudhiparbdha, Ptrapart. 1985. Towards A Language Policy Across the Curriculum: A Problem and a Challenge. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Bill, Robins (1985) Materials adaptation for Communication engineers. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Carter, Ronald A. 1985 Vocabulary and discourse styles across the curriculum. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Chantrupanth, Dhanan. 1985. Language of Science Study at a Graduate Level. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Cheong, Lee Kok. 1985. *English across the University*. A paper presented in twentieth Regional Seminar SEAMEO Regional Language Centre. Singapore.

Cocking and Chipment (1983): Correlation between language proficiency and math achievement

Cosntance Cerniglia and Karen Medsker (1990) Improving coherence by using computer-assisted Instruction

Christina Ackerl (2007) Errors of Lexico-Grammar in the Essays of CLIL and non-CLIL Students

Das, Bikram K. 1985. Writing Across the Language Curriculum, Comparing Rhetorical Strategies in Expository Writing in the First and Second Language.

Davis, Florence I. (1985) Teacher awareness of the language of textbooks across the curriculum. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Debie, Margaret (2006): Developing writing materials through reading, talking and writing

Dillon (2004. Test on social studies

Edward W. Wolf and Jonathan R. Manalo (2004) Direct assessment of composition

Eva Poisel (2007) Assessment mode in CLIL

Greenwood, John. 1985. The Case for "Content Across the Curriculum" as well as Language. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Gulam Reza Zarei and Sura Mansori (2007). Meta discourse in Academic prose: a contrastive analysis of English and Persian Research article.

Haris, David P. (1990). The use of "organizing sentences" in the structure of Paragraph in Science Textbooks

Harris, Vee (2006) Language Learning Strategies Across the Curriculum. Government policy and School practice", Paper presented at the British Educational Research Association Annual Conference. University of Warwick. 6-9 September 2006.

Honey, John. 1985). Language Across the Curriculum: The View from 1985. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

JIN Yao Hwa. 2007. Investigating the Difficulties in Speaking English for Academic Purposes. A case Study on an Oversea Chinese Student. *Sino-US English Teaching*. Volume 4. No. 4, Serial No. 40.

Julia Huttner and Angelika Rieder-Bunemann (2007) The Effect of CLIL instruction on Children's Narrative Competence

Lee Kok Cheong. 1985. English Across the Curriculum. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Maminta, Rosario E 1985. Forms and function in a concept Venture" in Science and Mathematics. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Marohaini Yusoff. 1985. *Reading and writing tasks: Reading and writing across the curriculum – a survey of reading and writing tasks of first year undergraduate at a University*. A paper presented in twentieth Regional Seminar SEAMEO Regional Language Centre. Singapore.

Meltzer and Hamann (2004) Teaching learning strategies

Merritz, John E. 1985. Reading and Information Skills: A Functional Approach. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Michael Bennet, David M. Wark (1985) Literary versus Scientific Reading in College – A comparative Analysis. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Mohan, Bernard. 1985. An integrated Model on Language and Content Learning. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Monica Barnengen (2010) Effects of writing on Standardized tests

Morris, Albert. 1985. Language and Learning Across the Curriculum; Process and/or Product. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Nababanm P.W, J. Readability of Textbooks Across the Curriculum. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

NG Seok Moi (1985) Effectiveness of integrative approach to teaching reading and language. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Platridge and Starfield (2007:119).

Pat Moore and Fransisco Lorenzo (2007) Adapting Authentic Materials for CLIL classroom

Nunan, 1992:

Peters, Pamela 1985. Writing across the curriculum in Australia. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Ratanakul, Suchart. 1985. Language Problems Across the School Mathematics Curriculum in Thailand. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Regina Nunez Perucha and Emma Dafouz Milne (2007) Lecturing a foreign language in a CLIL University context

Rick De Graaf, Gerrit Jan Koopman and Gerad Westhoff (2007) Effectiveness of L2 Pedagogy in Content and Language Integrated Learning

Robert William Health (1985) Teaching information sequence scientific writing. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Robinson, Bill. 1985. English for Communication Engineers: A Case study in Two-way Curriculum Development. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Rosemary (1985) Compatibility of language use across the curriculum in school level textbooks. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Salera, Erlinda C .1985 English and Math instructional materials in the lower primary. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Sasikumar 1985. Compatibility of language contexts and subject textbooks. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Suwana-Angsrn, Swasdi. 1985. Language Curriculum in the Context. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Susan Parks (2000) Employees' professional' writing competence

Suxhart Ratunakul (1985) Language problem across the school mathematics curriculum in Thailand

Swales, John. M. 1985. Genre-based Approach to Language Across the Curriculum. Singapore: SEAMEO Regional Language Centre. Twelfth Regional Seminar.

Swales, John 1990 Global coherence and lexical management

Swales, John. 1986. Nonnative speaker Graduate Engineering students and their introductions: global coherence and local management

Tickoo, M.L. 1985. English Across the Curriculum in two Universities Communicational Technique of Enriched Tradition? Singapore: SEAMEO Regional Language Centre. Twelfth Regional Seminar.

Underwodd, Mary. 1985. Improving Listening Skills Across the Curriculum. Singapore: SEAMEO Regional Language Centre. Twelfth Regional

Vollemer, J Helmut Johannes. 2006. *Language across the Curriculum*. Intergovernmental Conference. Language of Schooling: towards a Framework for Europe.

Wiseman, Hartwell, and Hannafin (1980) Reading and listening skills of secondary Mildly Handicapped students