EFL LEARNING/WRITING DEVELOPMENT IN THE INTERNET ENVIRONMENT:

A CASE STUDY FROM PRE-MEDICAL STUDENTS' PERSPECTIVES

DISSERTATION

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ABSTRACT

The current study focuses on pre-medical students' perceptions of English

learning/writing development in an Internet-integrated English as a foreign language

(EFL) classroom. The overall objectives of the study were to describe five students'

(a) experience in English education without the Internet at the pre-university level and

with the Internet at the university level, (b) perceptions of Internet uses in communication

via the online class discussion group, the Triampaet group, in research via Web search,

and in construction via group homepage project if they had impacts on their English

learning/writing development. The content for the three activities embraced English and

medical and related fields. The data from interviews, observation, and documents were

analyzed qualitatively and from writing samples quantifiably.

The results showed that the participants welcomed applications of the Internet in

the English class. They could push their boundaries of learning settings from the

classroom to the virtual world at their convenience, their own learning pace and

strategies, and for their own needs and interests. Connections made among themselves in

online group discussions, their positions as WWW searchers and readers, and their work

on the group Web page motivated their self-engagement in class assignments, stimulated

their senses of authorship, empowered their English learning/writing competence, and promoted interdisciplinary learning of their medical and related fields, electronic literacy, and English. Their perceptions on writing were supported by the findings through T-unit and error-free T-unit analyses of their first and last writing samples. Also included in the findings are their strengths and problems of the Internet in English learning from their perspectives.

Results discussed in terms of impacts of the Internet activities on the participants' English learning/writing abilities included communication with peers, topics of discussions, their roles as authors, and relationships between English proficiency and the pre-medical students' abilities to access Web pages, and between English proficiency and their degree of writing development. These findings led to pedagogical implications of considering construction of class assignments involving learners' areas of interests in connection with the Internet and its multimedia features. The teacher's roles in providing students with feedback and other assistance are necessary for their English language and writing development.

Dedicated to My Dearest Mother and Father

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CHAPTER 1

INTRODUCTION

This chapter presents the purpose, the objectives and the research questions, addresses the rationale and the significance of the study, stages the methodological framework, and describes the limitations of the study.

1.1 Problem Description

The Internet has recently played a significant role in foreign/second language learning (Kasper, 1998; Warschauer, Schetzer & Meloni, 2000; Warschauer & Whittaker, 1997; Warschauer & Meskil, 2000; Leloup & Ponterio, 2000). This is due to its growing number of information sources worldwide (Costello, 2000) and its potential to empower Internet users to communicate across temporal and geographical borders through a variety of modes of their preferences. In order to make the optimum use of the Internet in foreign/second language, both in-breadth and in-depth research is in great need.

During the past decade, researchers have examined uses of online or net-worked activities for writing development, such as computer-mediated communication (CMC), WWW searches and WWW construction, in ESL/EFL contexts. CMC is used in

previous studies to compare communications between face-to-face and a synchronous

mode to provide writing feedback to peers (Braine, 1997, 2001; Sullivan & Pratt, 1996),

and between face-to-face/synchronous and asynchronous modes to investigate

motivation, traits of language uses and writing complexity (Warschauer, 1996, 1999;

2000; Sotillo, 2000; Sengupta, 2001; Beauvois, 1996; Meskill & Rangova, 2000;

Biesenbach-Lucas & Weasenforth, 2001; Pellettieri, 2000). Web page searching for

project research is another online activity probed by researchers. It promotes writing in

terms of authorship, confidence and richness of content which learners can collect from

online information sources for text production (Warschauer, 2000; Kramch, A'Ness &

Lam, 2000; Bloch, in press). Related to Web searches is learners' homepage

construction. Previous studies (Lam, 2000; Chun & Plass, 2000) showed that learners

took a new role of writers considering audience, writing goals and writing quality in both

content and language uses.

     Up to the present, it is found that many studies aimed at gaining insights into

effectiveness of technological devices, analysis of learner's texts or categorization of

Internet resources. The issue of learners' perceptions of learning in the Internet milieu

should not be neglected. How can a class be conducted successfully without one of the

most significant components of learning? Learners play a high-stake role and have

impacts on success or failure of education. Scarcity of research on their perceptions may

make digital progress meaningless no matter how sophisticated, multi-functional, or

ingenious rapidly-developing technologies are.

     Not only are there inadequate studies of learners' perceptions at present, but other

voids could be observed in current literature of the field of ESL/EFL applications of

computer technologies in classroom. Even though these studies lluminated what happened in classes in networked and Internet environments, researchers focused on a specific mode such as communication via e-mail, the use of listservs, and chatting. Additionally, most research were conducted in ESL contexts and did not pay much attention to potentials of use of the Internet in English classes of specific disciplines such as medical science, engineering, and businesses and learners' perceptions of Internet activities that interrelate asynchronous on-line discussion, Web searches and Web construction. Moreover, little research was viewed through the qualitative lens with a supporter of the quantitative one. This study aimed at filling the gap by focusing on learners' perceptions of Internet activities, namely, asynchronous on-line discussion, Web searches and Web construction in an English class for pre-medical students at a university and their writing development. The main methodological framework was the qualitative one with the quantitative part to support learners' perceptions of their English writing development.

1.2 Purpose, Objectives and Research Questions

The overall purpose of the research was two-fold. The first one was to describe, analyze and interpret learners' perceptions of (a) their English learning/writing at the pre-university level, and in the technology-oriented environment at the university level, (b) their writing development qualitatively and quantitatively, and (c) strengths and problems in applications of the Internet in the English language class. The second purpose was to

suggest how the Internet-integrated learning environment could be implemented in a second/foreign language classroom in order to promote learners' learning/writing development.

The objectives of the study were as follows:

1. To describe learners' perceptions of their learning/writing and writing development in the Internet environment

2. To analyze how the perceptions impact the participants' learning/writing process and writing development,

3. To interpret the learners' perceptions in relation to their learning/writing process and writing development.

The major research questions of this study were:

1. What are the participants' perceptions of English learning and writing, and of the Internet at the pre-university level?

2. From the participants' perspectives, which contexts/environments enhance their writing development? What are the conditions that affect the participants' writing development?

3. Do the participants' perceptions of English learning/writing in the Internet-integrated environment have an impact on their writing processes and their products? If they do, what are they? If they do not, why do they not?

4. What are strengths and weaknesses of the use of the Internet in the English class as reported by the participants?

1.3 Rationale for the study

This study aimed at shedding light on the perceptions of EFL learners on English learning in the Internet-integrated environment with regards to their learning process and performance. Within the electronic literacy framework proposed by Shetzer and Warschauer (2000), learners engaged themselves in activities and a project related to communications, construction, and research via Computer-Mediated Communication (CMC) and the World Wide Web. This framework stressed the significance of enabling learners to learn by doing. Individual learner's learning by themselves and in collaboration with others in the Internet-integrated environment would enhance their second/foreign language acquisition within authentic, contextualized, and purposeful contexts. Research on learners' perceptions of their learning while performing tasks in the new environment would provide a powerful lens to view directions for second/foreign language learning/writing development.

In EFL settings, learners encounter many limitations that hold back their English learning development. Their learning environment is defined within the classroom with the teacher as the classroom authority and a single course book, which is the material rigidly designed to fit in with the course syllabus. Time constraints, large class size, and different levels of learners' English proficiency also make it difficult to organize activities that promote learning by doing or social interactions between the teacher and learners, and among learners themselves, regardless of attempts to link the classroom with outer communities which would make learning and class activities authentic,

contextualized, and purposeful. Under such circumstances, learners cannot reposition themselves from the peripheral learning stance to the center in order to transform themselves to become active foreign/second language learners and users.

The present study focused on EFL learners engaging in Internet activities. It is the broader social context where learners can learn and work at their own time, pace, English proficiency level and in their own comfort zone with the teacher as facilitator. Understanding learners' perceptions of what and how they learnt and worked on the Internet inside and outside the classroom communities as well as examining learners' writing performance could lead to suggestions, and pedagogical implications for English teachers, curriculum designers, and program directors for foreign/second language education development.

1.4 Significance of study

In the age of information technology, people across the world are more closely connected and well-informed. According to the surveys conducted in September 1997 and September 2002, by NUA, Ltd the world's leading resource for Internet trends and statistics, the number of Internet surfers dramatically increased eight times during the past five years from 74 million to 605.60 million. The current figure of the total world population online in March 2003 reported by Global Reach is 619 million, of which 230.6 million are English native speakers. Below is the chart showing the online language populations (ww.nua.com)
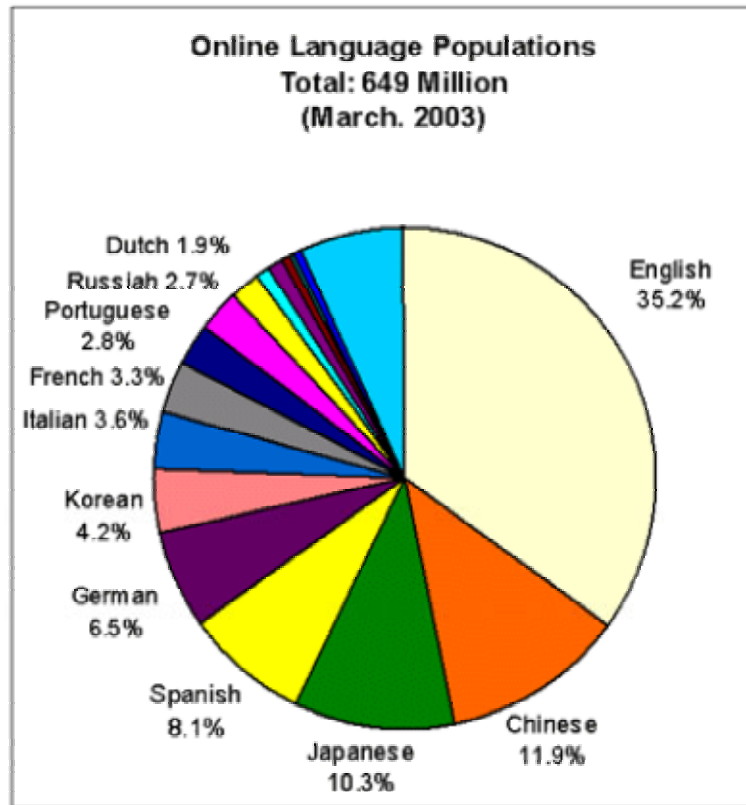
Figure 1: Online Language Populations

Axiomatically, English is the most widely used among the majority of online cosmopolitans. Such the great number of people may well manifest special characteristics of the Internet. It hosts countless information sources of various fields of study and interest from all parts of the world and allows them to be updated. Access to

Web sites can be made at high speed, and possibly with different presentation styles such as utilization of hypertexts and texts with pictures, voice, video, animations etc. to give readers' intensive and/or extensive data that may suit their interests.

In addition, Internet users may publish their work for public access, or enjoy their self-assigned roles as readers, writers, discussants, researchers, learners, teachers, informants, surveyors, contestants, educators etc. in the communication modes of their choices (e.g. email, Webboard, discussion groups or netmeeting with pictures and sound). Interactions of Internet users are, thus, authentic, contextualized and meaningful.

This setting may suit EFL learners, who are physically and geographically distant from such environment and contacts with English-speaking people. To include the Internet setting in class activities may provide insights into whether or not it will accommodate EFL learning/writing development. Up to the present, studies on learners' perceptions of English learning/writing activities within the research-communication-construction framework as suggested by Shetzer and Warschauer (2000) are very rare.

These Internet activities demand skills and knowledge in information processing. Learners need to learn where and how they can locate data, which sets of data are relevant to their needs, and how they can integrate data and construct knowledge from different sources. Also, learners need to be able to communicate with others in English, presenting themselves in their own texts. To encounter new and unpredictable challenges on the World Wide Web, learning through formulaic patterns of conventional instruction for accumulation of factual knowledge is not enough. It is necessary that learners' high-

order cognitive capabilities of interpreting data, problem-solving and transferring data into applications must be developed. Electronic literacy is essential and valuable to be introduced to learners.

With considerations of the Internet, its significant roles in life and growing Internet communities, this study attempted to present another facet of the Internet applications and learning phenomena from learners' perspectives and with the teacher as researcher. Insights gained from the study can serve to (a) support or reject existing claims made in previous studies and offer new substantial claims, (b) provide clearer directions of foreign language learning and writing in the Internet environments, (c) employ knowledge gained from students' perspectives to construct promising future English curriculum with uses of the Internet that serves students' needs, and (d) equip students with electronic literacy skills for the digital era. This study also played a significant role of raising English educators' awareness of activities in a new English class environment with the Internet and their effects on English learning/writing efficacy by providing EFL education with additional pictures of (a) what happens with learners' learning/writing processes in an Internet-integrated English class, (b) whether that has impacts on learners' English writing development and if yes, what they are, and (c) what kinds of advantages/challenges such a class likely encounters. Furthermore, since the current research focuses on learners from the medical program learning English from topics of their field, its significance is also favorable for EFL, ESL and ESP education.

1.5 Basic Assumptions

This study is based on the following assumptions:

1. The English entrance examination is the effective index in measuring the participants ' English proficiency.

2. The participants will make the best effort in participating and providing information to the best of their knowledge throughout the research.

3. All the participants have, at least, enough basic writing and computer skills in order to participate in the current research.

4. The participants will benefit from learning/writing by participating in Internet activities.

1.6 Methodological Framework

With the aim of gaining insights into learners' perceptions of English learning process in the Internet-integrated context and their performance achievement, I conducted this current study within the qualitative framework to obtain in-depth data for many reasons. First, understanding learners' perceptions is a complex issue related to learning processes and their behavioral patterns over a period of time. In order to understand and come to good grips with the goal of the research, it is necessary that in-depth investigation comes into play. Up to the present, there are few studies methodologically framed within this lens. A thorough and continual look at complex issues such as learners' perceptions can place another partial truth among the existing knowledge of the EFL learning. Another reason is that, through this framework, I can situate myself as an active participant in the research, interact with my participants, and develop relationship

with them. Taking two roles of an insider and outsider enabled me to examine the

phenomenon under the study from the vantage point of view (Lincoln & Guba, 2000).

As an insider, the teacher, I had opportunities to contact them on a regular basis inside

class, by appointment or emails. This could lead to development of trust between the

researcher and the participants which allowed me to obtain profound data. At the same

time, being an outsider helped me focus on the cores of the study and coded the data for

emerging themes. The combination of the positions, with self-reflexivity and peer-

debriefing as ways to maintain balance of self-inclusion/exclusion, enhanced the quality

of this research.

Another reason for my decision to work within the qualitative framework is that it

allowed me to collect data from learners through multi-methods: observation, semi-

structured interviews, document analysis and a grounded survey over a prolonged period

of time until the data saturation stage. To this extent, I was able to obtain thick data for

meaningful triangulation, another way of gaining trustworthiness that I employed apart

from member checking which were beneficial for enriching my findings.

With regard to investigating the participants' writing development, in addition to

qualitative data, quantification of syntactic complexity by means of T-units was also

used. This method helped probe the relationship between the student's perspectives of

their writing ability progress and writing quality investigated via their own texts. From

the reasons aforementioned, the qualitative framework and the quantification of syntactic

complexity earned its sound right for the present study.

1.7 Definition of Terms

1. **Pre-medical students**: Freshmen who entered the medical program, and by then, they were learning in the first semester

1. **Triampaet Group:** the name of the online class discussion group which consists of 32 pre-medical students plus the teacher as a moderator. It was constructed through YahooGroups.

2. **Medline Plus**: the world's largest health library, the National Library of Medicine which offers online health information to the public (URL: www.medlineplus.org)

3. **Syntactic complexity**: ability to produce longer and more complicated sentences to be measured in this study by the average length of T-unit and percentage of T-unit with dependent clauses.

4. **Dependent clause**: a part of a sentence which consists of a clause introducer such as 'which', 'while', 'because', 'if', 'even though', or 'that'. It cannot stand alone on its own but has to attach with its main clause (e.g. The only bad effects are *that it is hard to define whether the cloned embryo therapy is a medical problem and whether it is wrong to kill an embryo*.).

5. **T-unit**: an independent clause with its modifications. It can be a simple sentence (e.g. Everyone needs the best treatment for their health. = 1 T-unit) or a multi-clausal sentence [e.g. (1) *If* I have cancer and know *that* I will die soon, I think (*that*) I should have the right to die. = (1 T-unit); or (2) The patient has a severe cancer (= 1 T-unit); *thus*, he must be treated immediately (= 1 T-unit)].

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6. **Grammatical error**: error found at the morphological level (e.g. There are *hope*.), the syntactic level (e.g. When I'*m* in Prathom 4, I *studied* at A school.), and the lexical level (e.g. The patient in this case … must have an *incentive* care.).

7. **Grammatical accuracy**: percentage of error-free T- units (EFT) with no morphological, syntactic, and lexical errors. To calculate for the percentage, the total number of EFTs is divided by the total number of T-units, and then multiplied by one hundred.

1.8 Limitations of the Study

This research has three kinds of limitations in terms of methodology, of recruitment of the participants and of data interpretation. With regards to methodology, the findings emerging from the study lack the power of generalizability across time and population. This is because the main designed framework intentionally focused on a small number of participants researched within specific contexts. Furthermore, although the five participants were heterogeneous in terms of their levels of English proficiency, they shared common traits such as gender (all male), the area of interest (medical science), age (17-20), nationality and language (Thai). Despite the limitations, the circumstances strengthen the study in that it is an in-depth investigation of a natural intact classroom situation of learners who registered for the English for Pre-Medical course to meet the school requirement.

In terms of limitation of data interpretation, the study on human-beings and their perceptions in the new environment is a complex issue, especially when translation of

interview transcripts from Thai into English comes into play. Data interpretation demands careful management; otherwise, the study would tell the story of the researcher instead of that of the participants. Peer debriefing with an experienced Thai teacher of English and memberchecking allow me to portray my participants' account and their voices vigorously.

Last but not least, the topics of the participants' two written texts as collected at the beginning and the end of the semester differed. This constraint naturally affected the length of the participants' written texts. Yet, since the current study focused on their syntactic complexity, not the content, it was not affected by the topics of the participants' writing.

1.9 Summary

This chapter has introduced an overview of the research by giving a brief research background, stating the purpose, objectives and research questions, addressing the rationale for and the significance of the study, the methodological perspective, definition of terms, and limitations of the study. With the purpose to shed light on learners' perceptions situated within the electronic literacy framework, in Chapter Two, I will review the literature of electronic literacy as well as the growing body of literature on the Internet for second/foreign language learning.

CHAPTER 2

LITERATURE REVIEW

In this chapter, I will review existing literature pertinent to electronic literacy and relevant studies on the applications of computer technologies in foreign/second language classroom. At the end of the chapter, I will summarize and explain how this study seeks to implement the current literature.

2.1 Electronic Literacy

Over the past few decades, electronic literacy has grown with advances of Internet technologies. Digital texts, such as emails, originally carrying only plain texts, at present, can hold links to URLs, pictures, PowerPoint presentations, etc. To educate people with their presentation of new scientific discoveries, or to inform the public of their on-going scientific experiments, many Web sites integrate facilities such as online glossary for

difficult technical terms and medical terminology so that laypersons can understand the messages; they may equip their digital texts with pictures and sounds that enhance surfers' comprehension.

With technology advancement, literacy has changed from traditional linear and hierarchical to online non-linear, multimodal and discursive style (Lemke, 1998; Richards, 2000; Handa, 2001; Warschauer, 1999; Schetzer & Warschauer, 2000). To some critics, electronic literacy corrupts readers from their ability to read analytically from the beginning to the end (Postman,1995; Birkerts,1994). They criticize its emerging characteristics of being the hybrid of spoken and written form as arbitrary, not refined as the traditional literacy. On the contrary, advocates of electronic literacy welcome electronic literacy as the way to enrich communications (Warschauer, 1999; Richards, 2000; Handa, 2001; Schetzer & Warschauer, 2000; Cope, Kalantzis, & New London Group, 2000).

2.1.1 An Electronic Literacy Framework

The Internet has immensely immersed in many different aspects of life, including literacy. In the aspect of foreign and second language learning, Shetzer and Warschauer (2000) contend that, from the Internet, learners can posit themselves to potentially master the target language based on three major aspects: communication, construction, and research.

In terms of communication, the earlier approaches focus on speaking and listening while the electronic literacy approach includes CMC, which shares some features with written communication, others with spoken communication, in addition to their unique characteristics such as emoticons (Kern, 1995; Warschauer, 1996; Murray, 2000). The

synchronous chatting is an example. In this mode, interlocutors can exchange messages in real time by typing the text plus a smiley face or a rose; or they can set their chatting background to suit their taste. In the asynchronous mode, an e-mail message can be accompanied by a photo, a video-clip, or a PowerPoint presentation. Evidently, literacy has evolved into another stage which requires not only the translation of one medium of conveying messages but also new ways of interaction and collaboration.

With regards to construction, Shetzer and Warschauer (2000) discuss three shifts. The traditional essay transforms into hypertext. Words transcend into multimedia and authors establish themselves as co-constructors. On the Internet, a page can maintain its traditional look of linear text. Also, it can be written in a way to accumulate its content with linkages to internal or external Web pages or combination of different kinds of media. To create a good hypertext, it is necessary to take into account the rhetorical, organizational and technical challenges in order to communicate effectively with an audience (Kress, 1998; Lemke, 1998).

For reading and research, the Internet holds a great variety of information from all parts of the world. Due to the richness of information, readers/researchers can retrieve data conveniently. Yet, they need to familiarize themselves with the nature of the hypertext; otherwise, they may get lost or distracted from their focus. Moreover, they need to be capable of searching and have a critical and evaluative mind in order to make the best benefits from the information sources since not all the Web sites contain valid, reliable or valuable contents that meet their needs.

In sum, the electronic literacy manifests its new form of reading and writing via the Internet and its tools such as CMC. It has the potential of enabling foreign/second learners to become language proficient in three main aspects: communication, construction, and research.

2.1.2 Development of SLA Theoretical Frameworks and CALL

Computer-assisted language learning (CALL) has developed in compliance with changes in learning approach. Kern and Warschauer (2000) categorize the development into three stages: structural approach to CALL, cognitive approach to CALL and socio-cognitive approach to CALL.

Within the structural framework, CALL activities involve grammatical rules and vocabulary in the formats of drills and pattern practices. Learners have options to enter the drills or practices from the start or they may get tutoring on the topic of their need beforehand. They may time their performance and obtain their scores with feedback on the point of errors. The focus of this type of CALL falls on discrete language points, with the computer as the tutor. Kern and Warschauer (2000) find drills programs of this type generally excited learners and instructors. Yet, the authors commented that the technology used was not sophisticated because it allowed only one response per item and the instructions provided were "merely perpetuated existing instructional practices". Another drawback of this type of practice is its keys to questions which are limited within the programmed scope despite other possibilities. Learners within this framework are, thus, regarded as computer-interfaced users, interacting with the standalone computer programs without any social interactions.

Cognitive approaches to CALL, on the other hand, shift the center to learners and enhancement for them to construct knowledge through creative action in "simulated microworlds". Learners would be provided with simulated environment where video, sound, graphics or text were integrated in combination with optional comprehension tools such as transcriptions and a glossary. Through this learning, learners learn to do something with tools and resources installed in the simulated environment. However, this type of CALL is still confined within the programmed environment of the user-computer interactions.

In addition to the structural, and cognitive approaches to CALL is the socio-cognitive approach (Kern & Warschauer, 2000). Learners are able to socially interact with other human beings in authentic discourse community through the development of the network system.

Based on this approach, CALL activities allow learners to use the computer program to study the given text and then recreate their own text to build up their language. That switches the status of the computer from being the tutor to becoming a tool to facilitate language learning. Programs such as MS Word encourage language learners to develop their writing and its process by means of equipped devices such as grammar or spelling check and thesaurus. Learners could revise and edit their writing with ease (Pennington, 1996). Concordance, the program constructed to hold the databases of a huge amount of texts, also enables learners to investigate words and their uses in authentic contexts for syntactic as well as semantic accuracy.

For networking language learning, the influential computer tools for communication are (a) computer-mediated communications (CMC), and (b) the World

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Wide Web (WWW), globally-linked hypertext. CMC allows language learners to gain

access to communities in which they could communicate with native speakers of their

target languages or their peers via synchronous or asynchronous modes.

The hypertext and the hypermedia in the World Wide Web, on the other hand,

lead to a novel face of text construction linked within the global network. Kern and

Warschauer (2000) identify the features as "1) informational representation through

multilinear strands linked electronically, 2) integration of graphic, audio, and audiovisual

information together with texts, 3) rapid global access, and 4) ease and low cost of

international publication" (p.12). With these special features, language learners can

research by searching for information in the foreign/second language in its contexts with

ease. They can publish their writing on the Internet for audiences outside their language

classrooms.

2.1.3 The Internet : CMC and WWW

The Internet is the fastest-growing technology in telecommunications

(Warschauer, 1997). Newsbytes reports that the approximate number of Internet users

around the world will reach 943 million by 2005, which is 93 times the volume traffic in

2000 and 8 times exceeding voice traffic (Nua.com). Websites have increased from 150

Web sites in 1993 to one billion in 2000 (Costello, 2000).   This signifies the growth of

human desire for community (Weigel, 2002).

The Internet is powerful for e-learning. It engenders the possibilities of individual

and social form of learning where collaboration among learners, contributions to the

learning of other learners, and learning from experts would guide learners to establish and

augment their knowledge (Pang & Hung, 2001). The researchers stress the significance

of learners and their awareness of relevance of course content, and the connections they can make with expertise or knowledge within the community of practice, in addition to searching for the required information and resources on the Internet. Singhal (1997) states further that the e-learning environment promotes higher order thinking skills. Learners need to be able to locate information sources, scan, discard, evaluate, select and synthesize information from the sources.

Osuna and Meskill (1998) investigated the potential role of the Internet in relation to Spanish culture. They found the Internet to be a suitable medium for learning the target language and culture, the students' motivating device, and the tool that can balance the learning from the authentic world and the course textbook.

Certainly, the Internet has increasingly played its role in foreign/second language learning. From his surveys, Kim (2001) reports four major types of production on the Web: computer-mediated communication (CMC), text-based mode (TB), drills and practices (D&P), and tutorials (T). His finding is supported by researchers/educators (Warschauer &Meskill, 2000; Warschauer & Whittaker,1997; Leloup & Ponterio, 2000; Kasper, 1998; Osuna & Meskill, 1998) and the designs of many major ESL/EFL Web sites such as Dave Sperling's ESL Café at http://www.pacificnet.net/~sperling/eslcafe.html , TESL/TEFL/TESOL/ESL/EFL/ESOL Links, http://www.aitech.ac.jp/~iteslj/links/, …

CMC (Computer-Mediated Communication)

CMC refers to a vehicle that enhances students' abilities to communicate with their peers or others outside classroom settings via synchronous modes such as live chatting, teleconferencing or asynchronous modes (such as emailing, discussing on the

listserv) via the computer terminals. It "has great potential for changing the ways students and instructors interact and may prove influential in reorganizing the entire learning process" (Bonk & King, 1998). Users interact with their interlocutors across time and geographical boundaries within their comfort zone. They "create a distinctly unique social context" (Beach & Lundell, 1998) in which participants, through interaction, read and write messages in accordance with social situations and community culture, and establish their "selves" to project their voices (Warschauer, 1995).

Synchronous Mode

The synchronous mode offers special features for communication. Students can interact spontaneously via the text chatting or the voice chatting with or without pictures of interlocutors (NetMeeting or teleconferencing). Beach and Lundell (1998) found the synchronous mode created a new social context, in which participants exchanged their messages in the way that they needed to be able to read the underlying point of messages and write their messages in response to the point. Participation in the context requires prompt reactions to keep the interactive chains moving.

Up to the present, the increasing number of educators and researchers in foreign language education pay attention to studying the synchronous text chatting (Braine, 2001; Sullivan & Pratt, 1996; Sotillo, 2000). Braine reported that real-time conferencing was advantageous for second/foreign language learners since they increased better discussions. It promoted students' participation. Students could express their train of thoughts without worrying about turn-takings, or interruptions. At the same time, they could obtain immediate feedback from peers. According to Sotillo, Braine, and Sullivan and Pratt, the classroom transformed itself into the communication platform, the one

mostly manipulated by learners. In a large group or whole class discussion, however, Braine revealed that floods of messages due to a lack of turn-taking in this mode easily caused confusion among participants because they found it difficult and exhausting to read, respond to or trace the strings of messages of their interest among other strings on the same computer screen. Another disadvantage could be that students may not have enough time to reflect on the messages they received or sent out. An interesting comment on the effective use of chatting is that chatting should not be for the sake of chatting. It should serve the purpose of joint investigation between the interlocutors on a project or joint exploration (Warschauer & Meskill, 2000*).* Research findings offered inconclusive evidence to finalize if communication via the synchronous mode would enable foreign language learners to develop their writing or their speaking abilities and how to enhance such development.

  Asynchronous Mode

  Unlike learners in the synchronous mode, those in the asynchronous mode can communicate with others in the environment at a slower pace. The setting was comfortable and dynamic for even shy or reticent students to voice their opinions by interacting with others the way they would not in class (Belcher, 1999; Beach & Lundell, 1998). Students can store the incoming messages, study and review them to develop their target language writing competence (St. John & Cash, 1995). Also they have time to think while composing messages, rewrite, or revise those messages as much as they want. With time for reflection of students' messages, many studies in the asynchronous modes stated advantages of communicating in the target language. Students wrote with better

quality, a greater length, more variety of discourse functions and more complex syntactic messages (Sotillo, 2000; Warschauer, 1995; Warschauer, 1996; Kern, 1995; Anton, 1999).

WWW

One of the highlights of the Internet is proliferation of information worldwide. With free space, individuals, groups or organizations can create texts based on their interest and expertise on Web sites and present them to interest groups in world communities beyond boundary limits (Costello, 2000; Wiegel, 2002). For example, WebMD provides its audience with rich information on medical advance of "embryo". At the same time, CNN.com presents different angles of the so-called "scientific success." The texts from such different sources accessible within the computer monitor just a click away could stimulate audience's critical thinking by digesting and evaluating different sets of information and establishing their reactions/responses to the issue in focus.

The proliferation not only manifests itself in a huge number of texts authored by an increasing number of people from different parts of the world but also in the format of texts themselves. Unlike traditional texts on paper, digital texts can be embedded with texts of subtopics which may be constructed by the authors themselves or co-constructed in collaboration with other authors online. In addition to the internal and external links of texts, they can be incorporated with other legends such as sounds, video strips, slides, or pictures. This leads to the change of writing and reading from linear fashion to non-linear and discursive style that attracts the increasing number of audience.

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At this point, we can see that there is a potential for the interchanging roles between audience and authors. This is a supportive setting for English learners to learn the target language productively from the authentic texts produced by people with expertise in their specific fields. Learners are able to get access to experts in areas of their interests and their professional communities while being able to develop their language competence through their exposure to the language in use. Apart from being information consumers, learners can become authors of digital texts and publish their work on the Web.

2.2 Content-Based ESL/EFL Instructions and the Internet

Content-based instructions (CBI) energize the concept of coordination between the content and language learning (Mohan, 1986). CBI has essential characteristics that can guide learners to success in language and content development: (a) the focus on the subject-matter, (b) authentic language and texts, and (c) the needs for specific group of students (Stryker & Leaver, 1997). In correspondence with CBI, Swales (1990) proposes genre analysis (GA)---"the study of the structural and linguistic regularities of particular genres or text-types and the role they play within a discourse community" (Dudley-Evans, 1998). The communicative purpose plays an important role in genre categorization (Askehave & Swales, 2001; Swales, 1990).

Many studies employ text- or corpus-based analysis of discourse as used in research papers, business letters or reports to identify language patterns in order to present to language learners materials that comply with authentic discourse of the

community (Upton, 2001; Feak, Reinhart & Sinsheimer, 2000; Marco, 2000; dos Santos, 2002; Soler, 2002) . With the special features of CBI and its promising success in enabling language learners to develop their language proficiency level through subject-matters of their needs and interests, many educational institutes at the tertiary level offer English courses for business, technology, agro-industry, science, medicine, biology and so on (Edwards, 2000; Soler, 2002; Feak, 2000; Kasper, 1998; Marco, 2000).

Despite being in the infancy stage, the growth of CBI has increasingly gained its prestige with the advance of the Internet, which is ultimately about connection and establishment of community (Wiegel, 2002), the evidence of which is the dramatic increase of Web sites from 130 in 1993 to one billion Web pages in June 2000 (Costello, 2000). Content-based ESL/EFL learners can benefit from gaining easy access to authentic texts of a variety of fields written by experts for their target audience beyond the classroom walls. For example, biological, or medical students can surf Web sites of their professional community for information such as from National Library of Medicine or they can visit Web sites for ESL/EFL students when needing help on vocabulary, grammar, writing, reading etc. Researchers (Peterson, 1999; Leloup & Ponterio, 2002; Kim, 2001) have recommended Web sites which can be used in CBI class.

Up to the present, themes of research on the CBI in collaboration with the Internet are still limited to culture and general science such as environment (Lee, 1998; Meskill & Ranglova, 2000; Kasper, 1998; Furstenberg, Levet, English & Maillet, 2001). Osuna and Meskill (1998) on her study with a Spanish class, revealed that learners found the Web informative and motivating which helped them gained more understanding about the Spanish culture. This finding was confirmed by Lee (1998). She introduced online

newspapers and online chatrooms to her Spanish class for cultural learning. The researcher found the on-line newspaper rich in input and authentic reading materials. Learners learned not only current lexical items, grammar and idioms but also the target culture in comparison with theirs. The understanding of culture helped students feel more comfortable when communicating with native speakers. It also enabled them to read critically for interpreting, analyzing, synthesizing and evaluating the on-line articles.

Furstenberg, Levet, English and Maillet (2001), on the other hand, conducted an international project on cultural literacy between two institutes: the Massachusetts Institute of Technology in Cambridge, and the Institut National des Telecommunications in Evry, France. The project aimed at widening learners' perspectives of how other people in other cultures experience their world by surfing the World Wide Web to enhance understanding between American and French learners. The project started with the teachers' questionnaires. Learners submitted their answers on the Web side by side in their native languages, observed similarities and differences with their classmates, forming hypotheses of the differences, and then, shared their observations and hypotheses with their oversea partners and exchanged queries and answers. Through the process along with more research on culture on the Web, videotapes and books, learners constructed their own knowledge of cultures and communication.

Warschauer (1999) studied an academic writing class in which network-based activities such as email, listserv, and homepage were integrated in the way that the online communities within the classroom and within each learner's content/professional area could be established. Learners could co-construct knowledge of academic writing via the Daedalus Interchange and emails. However, few learners found the Web page

construction and professional listserv relevant to their current needs. Some of them felt

awkward to construct a homepage with their picture and they were not sure of who would

be their audiences. For the professional listserv, only one learner joined their

professional listserv. Many responses were useful and friendly except one which

commented harshly on her grammatical mistakes.

2.3 Foreign/Second Language Learning and Network/Internet

This part includes reviews of learners' motivation, their writing in the

network/Internet environments, and writing assessment of learners' assignments.2.3.1

2.3.1 Affective Issue

Attention to the way learners of foreign/ second language learn in the networked

environment has recently attracted more researchers these days. Since the network

promotes learners' autonomy with the teacher as the facilitator (Braine, 2001;

Warschauer, 1999; Meskill & Ranglova, 2000), knowing their positive or negative

attitudes toward learning in the environment is necessary for satisfactory learning

outcomes.

In the e-mail environment, a considerably significant number of studies report that

it affected learners' high motivation. Warschauer (1996) surveyed motivation behind the

use of the computer of 167 ESL and EFL students from three different countries for

writing and communication in their academic writing classes. He found that the students

were highly motivated across gender, typing skills, and possession of the computer at home, and that the motivation derived from three major sources: students' senses of communication, empowerment and learning.

Warschauer's research was supported by later studies. Meskill and Ranglova (2000) revealed that their quantitative comparative research showed university Bulgarian learners' high motivation and confidence in communicating in the target language through an e-mail collaboration project. The email exchanges with their American partners boosted their enthusiasm in conveying their own messages with their target audiences. Like Warschauer (1996), the researchers reiterated that in establishing a curriculum with the integration of technology, constraints of learners' novelty of the technology in the new curriculum could be lessened or removed by motivating them through active engagement and empowerment.

The previous findings were evidenced at the primary level as well. Ho (2000) worked in collaboration with teachers in a primary school in Birmingham, England, in a students' email exchange project. The researcher found that e-mail communication helped develop her Singaporean learners of English' confidence in communicating in L2 with native speakers. They engaged in the activities enthusiastically. One of the most important findings was that students learned to position themselves in a dynamic, international, and global community with an intercultural awareness.

Email exchange can also boost learners' motivation when they have freedom to write. Gonzalez-Bueno (1998) reported learners' active participation in emailing their teacher on their own initiated topics and at their convenient time. They felt empowered since they took a grip of manipulating the communication in its context. The finding

correlated with Prapphal (2000). Some participants voiced their perception of emailing their teacher on the assigned topics of their writing and grammar problems as too dry, though beneficial for their writing development. For them, it would have been more motivating if they could have been free to write about topics of their interest and with others in addition to the teacher. It is clearly seen that learners' motivation could become low when their autonomy is forfeited (Warschauer, 1999).

Studies on listserv discussion also revealed learners' motivation. Pang and Hung (2001) asserted that learners became motivated when the task was of problem-solving type that engaged all members and when contributions of group members would lead to solutions. Belcher (1999) found that an asynchronous newsgroup of her composition teaching methods class for graduate students projected "confidently self-identified voices" to their known audience, even from those, especially non-native speakers who were shy and reticent in class. She asserted that when compared to face-to-face context, the discussion newsgroup was a comfort zone which motivated students to contribute as much as they wanted at their own time, and pace. In Chen's study (1998), high school learners were excited to join listservs of their own choice after being introduced to them and observing their activities. Learners were confident in and satisfied with becoming a part of the community where they could use English for real communication and audience.

Despite those potentially productive findings, Hiltz (1998) voiced his concern about the freedom for list members to respond to others at their own pace and time in the asynchronous communication. That also meant the unpredictable amount of time to

receive any reaction or feedback. What Hiltz suggested was to maintain the social

relationship, social presence, and the sense of community so that participants would

collaboratively work toward their goal.

Like the asynchronous mode, studies on learners' motivation in the synchronous

mode show their positive attitudes towards learning (Braine, 2001; Beach & Lundell,

1998; Sullivan & Pratt, 1996). They reported learners' satisfaction of the mutual learning

from chatting. It promoted students' participation. Students could express their train of

thoughts without worrying about turn-takings, or interruptions. At the same time, they

could obtain immediate feedback from peers. They also learned to respond in the way

that they could keep up with the on-going discussion by writing short comments (Beach

& Lundell, 1998).

From discourse analysis, researchers found that language learners felt more

comfortable to communicate in the Internet environment (Beach & Lundell, 1998;

Sotello, 2000; Darhower, 2000). Such environment motivated them to express more even

by reticent students when compared to their face-to-face communication. Discussants

felt secured, belonging to their community to voice their different opinions online.

"…students mutually construct a shared intersubjective perspective that transcends each

of their own individual perspectives"(Beach & Lundell, 1998). In other words,

disagreement, conflicts or misunderstanding lingered for a while before reaching

resolution through communication.

Like Beach and Lundell (1998), Hiltz's (1998) voiced his concerns about the

communication in a small group and with the teacher as the facilitator and "provocateur"

In the context, participants found themselves in the circle of discussions and tended to

argue or debate with others over debatable issues. Whenever pauses took place, the teacher needed to intervene by stimulating some controversy for learners to jump into discussion.

Studies on the Web applications for language learning also manifest positive attitudes of learners (Reeves, 1997; Furstenberg, Levet, English & Maillet, 2001; Chen, 1998; Bloch, in press) with mostly rich text-based information (Wilbur, 1997) of many content areas (Reeves 1997). In the study of Furstenberg, Levet, English and Maillet (2001), French and American students from universities, learning cultures, exchanging their observations and hypothesis with their classmates and their target language partners could establish their understanding of their target cultures from their search for information on the Web sites as well as their bi-national listserv (French and American). Lee (1998) found that online newspapers motivated advanced learners of Spanish through the authentic materials for native speakers to learn their target language and culture with enthusiasm and interest beyond classroom.

Kannan and Macknish (2000) examined motivation of language students in a Singaporean polytechnic in an on-line course. They found that students' motivation in the computer lab was heightened when they could surf the Web and share information with peers. However, it was lowered when they encountered technical problems and when they had to carry out unmotivated tasks. No grade assigned to the course was another factor that might lessen the significance of the course content, which distracted many of students to be engaged with their own attractions on the Internet instead of doing

their assigned tasks. They suggested that grading was important because it influenced students' attention and the quality of their work. Also, the technician should be available to help solve technical problems.

Motivation also arises by the opportunity for learners' publications. Their work may be published on the Internet, connecting themselves as a part of the electronic communities to their outreach audience worldwide. Their writing assignments are not the work just to be handed to teachers for a grade and then become a lost loose sheet because they can be published at no cost in the cyberspace (Shetzer & Warschauer, 2000). Their products displayed to the public will be very meaningful to them because they sense their ownership and authorship. That may urge them to work with more attention and responsible for their audience as can be seen from the study of Kramsch, A'Ness and Lam (2000) in which students in a Spanish-language class produced multimedia texts on Latin American culture for future undergraduates and their instructors. In order to carry out the project, students needed to surf the Internet for information and then designed their Web site in collaboration with their co-workers. The writing part was also exciting for them since it was the target language that they used to communicate in the authentic environment for authentic audience. Lam (1999) did a case study on a Chinese learner of English, a language learner failure, who strived to motivate himself to construct his own Web site to communicate with teenagers interested in Japanese Pop music. The motivation pushed him forward to be able to manipulate the communication channels online with others successfully.

Few studies focused on the applications of many types of technologies to investigate perceptions in the English language class. Among the few was the one

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conducted by Stepp-Greany (2002). In her survey study with the aim to investigate

students' perceptions on the roles of the instructor in different technological settings,

learners were motivated to learn by being engaged with a variety of activities such as

listserv, CD-ROM, emails, and Internet activities. She found that the instructor played a

significant role in learners' learning progress despite the learning-facilitating

technologies.

     Among the studies aforementioned, all focused on students' motivation and

perceptions in a particular technological enhancement (except Stepp-Greany 2002) such

as email (Warschauer, 1996; Meskill& Ranglova, 2000; Ho, 2000; Gonzalez-Bueno,

1998: Prapphal, 2000; Warschauer, 1999), listservs (Pang & Hung, 2001; Belcher, 1999;

Chen, 1998, Hilz, 1998), chatrooms (Braine, 2001; Beach & Lundell, 1998; Sotello,

2000; Darhower, 2000), and on Web site applications (Reeves & Reeves, 1997;

Furstenberg, Levet, English & Maillet, 2001; Chen, 1998; Bloch, in press; Lee, 1998,

Kannan & Macknish 2000, Kramsch, A'Ness, & Lam, 2000, Lam, 1999). In addition, for

listserv activities, there arose problems of the influx of messages into learners' mailbox,

accompanied by the problems of learners' reading overload, inability to respond to all of

them or to current issues as the discussion had changed its focus to more current

messages, and the technical problems such as the malfunction of incoming mail. Other

problems included absence of instructors from the listserv which, despite their good

intentions to empower students to lead the flow of their communication, negotiate and

socially construct knowledge among peers without instructors' intervention, impacted

many students' perceptions of their learning effectiveness as found in Stepp-Greany

(2002).

Taking the problems stated earlier into considerations, the study was designed to fill the gaps by investigating learners' perceptions in language learning through combination of technologies: the listserv, WWW research and Web site construction. The teacher participated in those activities. Based on previous findings of learners' feeling overwhelmed by the uncontrollable number of incoming messages, size of discussion groups varied from the whole class to small groups of four to illuminate strong and weak points when learners participated in discussions.

2.3.2 Writing Development

Language proficiency development through network applications is one of interesting issue for foreign/second language acquisition research. Many researchers studied this issue from learners' discourse as well as their perceptions.

With regard to writing discourse, some researchers conducted research on the impact of the network applications on learner's writing. They found that learners' writing essays improved in terms of quantity and quality (Sullivan & Pratt,1996; Braine, 1997; 2001). When compared to the traditional class, Sullivan and Pratt (1996) found the performance of the network environment more productive and superior to the traditional class while Braine found it true only in the very first draft of writing but the last draft of the traditional class became superior, from his speculation, due to learners' turn-taking in the face-to-face environment where fruitful feedback could be offered in an understanding, organized manner. Gonzalez-Bueno (1998) carried out a study on communication through email, and found (a) greater amount of language; (b) more variety of topics and language functions; (c) higher level of language accuracy; (d) more similarity with oral language; (e) more student-initiated interactions; and (f) more

personal and expressive language use. The findings were similar to Darhower (2000).

He studied the synchronous CMC, the chatroom as a mediator, in the intermediate

foreign language class within the socio-cultural case study. Students discussed stories

they read in class with their peers in the chatroom. He found that the setting provided

students with the unique communities bound by common interests, tasks, and technology.

In the communities, they performed tasks in the target language with freedom to

transform assigned tasks, to go off-tracks whenever they would like to, and to use

language functions atypical of the L2 classroom environment. The teacher had no power

to control their flow of messages.

Writing development could also be observed from the learners' independent

learning. In the email mode, a German learner of English communicated with his key-pal

who was the native speaker of his target language with success in improving his writing

style, grammar and vocabulary choice. He archived his partner's e-mails and studied

from the messages in order to interact with his partner. Throughout the period of

communication, he tried to use new expressions, correct his own grammatical mistakes

and employ new vocabulary he had acquired from authentic use for communicating with

his real interlocutor. His writing developed dramatically (St. John & Cash, 1995).

Another interesting study focused on the learners' language syntactic complexity.

Sotillo (2000) compared synchronous and asynchronous modes of communication in her

Spanish class. When compared messages from the different settings by means of the

clause and Minimal Terminable Unit (T-unit), she found that asynchronous mode enabled

learners to produce syntactically more complex language. The quantity and types of discourse functions present in synchronous discussions, on the other hand, were similar to those in face-to-face conversation.

Regan and Zuern (2000) conducted action research on a writing class with an attempt to link the class with the community via the Internet. Learners were assigned to complete four writing assignments: a single-authored traditional essay, a single-authored Web-based research paper, a single-authored or collaboratively produced electronic educational resource for use in the service-learning project, and a collaboratively produced group report on the service-learning projects. These assignments were added up with informal writing including email exchanges, threaded discussions in the Web-based class discussion space, and reflections on service-learning experiences. The experiential learning enabled learners to improve clarity and economy of writing through the process of intensive teacher and peer review online. Their written work was finally uploaded on the project Web site for a real world audience outside class, that encouraged learners' sense of authority and authorship to produce responsible and professional output.

Despite the fact that writing development in the Internet setting looked promising, Biesenbach-Lucas & Weasenforth (2001) found through text analyses that there were no difference for uses of grammatical and lexical elements. Moreover, email messages were even shorter. Contradictions of findings require further research with the focus on writing development in the electronic environment to take part in substantiating existing knowledge.

2.3.3. Writing Analysis

Learners' writing performance is another issue of interest in this study. This part will be the review of writing assessment literature that targets at writing development in electronic environments. The following literature reveals three ways how researchers examined texts: type token ratio and coordination CI, T-unit and word counts for language complexity, and Wilcoxen matched-pairs signed-ranks test for text length, and TWE scoring guide for holistic writing performance.

In Warschauer (1996), the issue of language complexity in two modes: face-to-face discussion and electronic discussions, was examined with type token ration (TTR) analysis and coordination index (CI). The type toke ratio analysis involves the division of the total number of different words divided by the total number of all words. The higher the value of TTR, the more complex the learners' language becomes. On the other hand, CI analysis is the way that works inversely proportional to complexity according to the assumption that advanced writers write with more subordinations than beginners. To measure for CI, the total number of independent clause co-ordinations is divided by the total number of all dependent and independent clauses in combination. In Warschauer's study, he examined TTR from excerpts of the same amount of the total words in the face-to-face and electronic environments since TTR varied according to the length of the passages. He found that the electronic discussions revealed more complex language, especially syntactically, than the face-to-face discussions.

Another method used to trace learners' syntactic complexity is the Minimal Terminable Unit or T-Unit. It is the smallest unit which consists of a sentence with one independent clause and/or dependent clauses (Hunt, 1965;1970). In Sotillo (2000), the

investigation of the syntactic complexity includes T-units per CMC sample text, error-free T-units, total number of clauses per CMC message, error-free clauses, total number of words per CMC text/message, total number of subordinate clauses, total number of embedded subordinate clauses, and T-unit length. I reviewed applications of T-unit and found that some studies pointed out the failure of the T-unit in dealing with sentential excessive coordination and with the extensive circumlocution as interpreted as syntactically complex clauses. Despite the shortcomings, Sotillo (2000) found the T-unit analysis objective means of assessing writing syntactic complexity, when using it with error-free analysis.

In Biesenbach-Lucas and Weasenforth (2001), attempts were made to compare learners' email writing and word-processed writing in terms of occurrences of lexical items and text length. The researchers analyzed 42 texts by means of word counts, and text length by means of Wilcoxen matched-pairs signed-ranks test. They found no obvious differences in the use of grammatical and lexical items between email writing and word-processed writing. Yet, the result of testing the text length revealed that email writing was significantly shorter than the other mode.

The holistic scoring of TWE (TOEFL Test of Written English) is another instrument used in measuring non-native English speakers' writing in the electronic environment. It is criterion-based and used to score a 30-minute writing in six scoring levels. Braine (2001) compared the first drafts and final drafts of Hong Kong learners of first English written assignments in two settings, a traditional class and a class in LAN environment. The purpose was to investigate learners' writing quality and writing improvement.

Since this present study focuses on examining students' syntactic complexity of two pieces of online writings of five participants, the quantifiable methods that included the T-unit analysis and error-free T-unit analysis are the most suitable. CI together with TTR may have been appropriate to measure students' writing in the synchronous mode, of which the texts were short and written spontaneously as seen in Warschauer's work. In terms of analyzing more complex texts in the asynchronous mode as posting to the listserv employed in this present study, CI is still in its infant stage and needs to be further developed in order to clearly explain phenomena such as the analysis of embedded clauses (Bardovi-Harlig, 1988). Meanwhile, Wilcoxen matched-pairs signed-ranks test may be an effective tool to trace student's writing progress, it is, yet, suitable for a study with a greater amount of writing samples, not this study which focused on analyzing two pieces of writing by only five participants. Thus, the statistic method was not a logical device for the measurement. And so was the holistic scoring which is designed to measure students' 30-minute writing ability whereas students' postings in this current study were written at students' convenience. With these reasons, it was logical to employ T-unit analysis and error-free T-unit analysis to measure students' writing progress.

2.4 Summary

In this chapter, I have reviewed three main topics pertinent to this current study. In electronic literacy, I have described 1) what electronic literacy is, 2) how the fast-growing development of the Internet technologies: CMC and WWW can have impacts on

foreign/second language learning in terms of communication, construction, and research, and 3) development of SLA theoretical frameworks and CALL from the views of Kern & Warschauer (2000) about the structural, cognitive and socio-cognitive frameworks and development of technologies. The next topic is content-based ESL/EFL instructions and the Internet. Needs, interests and learners' areas of interests in relation to computer technologies are in the focus for foreign/second language learning. The review ends with foreign/second language learning and the Network/Internet applications, their motivation, research on writing performance, and writing analysis.

From the literature review, albeit the growing number of studies on the computer technologies and foreign/second language learning, few focus on how learners of different language proficiency levels in EFL contexts perceive how the Internet integration with content-based English class impact their writing development. Researchers have demonstrated possibilities of benefiting from networking/Internet applications for learners' writing development by means of single tools such as chatting, e-mail, Web construction.

Current published research has not examined learners' perceptions of their writing behaviors and performance in the aspects of communication, construction and research as integrated for class assignments. The proposed study attempts to fill the gap in the literature.

CHAPTER 3

RESEARCH DESIGN AND DATA ANALYSIS

3.1 Research Design

3.1.1   Case Study

The qualitative case study is the main approach to this research. Based on the

qualitative methodology, the researcher needs to enter the field to interact with the

participants in the naturalistic setting for data collection. Data saturation---the point

where emerging data are repetitive with the earlier collected data---is a significant

indicator for the researcher to quit the field. Unlike the quantitative methodology that

requires fixed rigid framework of the study and specified methods for collecting and

analyzing data, in the qualitative research paradigm, there are no fixed methods for data

collection or data analysis. The qualitative researchers aim at searching for emerging

themes or patterns and explaining them on the theoretical framework into which the

research is conducted.

According to Wallace (1998), case study refers to "the systematic investigation of

an individual case" (p 47). As an approach under the qualitative perspective umbrella,

the case study aims at describing the study in its context, particularities and

systematization rather than generalizability (Stake, 2000; Johnson, 1992; Wallace, 1998). Its strengths lie on its capacities to enable researchers to understand a phenomenon of a case in-depth with the specificity of its context and, as a result, it may yield evidence to support or modify or reject the established theory by viewing if a case or cases or "the experiences of one learner are either consistent with or divergent from theoretical claims" (Johnson, 1992). Weaknesses of case study may emerge from researchers' excessive emphasis on their impressions, and subjectivity. Researchers need to do reflexivity and seek for ways for triangulation so that their research earns trustworthiness.

In terms of process, the case study starts from selecting the case, familiarizing with it and then drawing its boundaries. Then, researchers need to establish the conceptual structure i.e. to give priority to what to study and discard what not. They then develop research questions and do data collection. To analyze the data, researchers will repetitively read, reread, and organize collected data and reduce them in the search for emerging patterns, consistencies and manifestations (Stake, 1997).

3.1.2 Case Study Methodology

With the nature of the case study of being flexible, naturalistic and descriptive, the methodology that suits it, is naturalistic observation and the elicitation of data (Johnson, 1992). In naturalistic observation, researchers may do note-taking, audio- and/or video-tape recording, journal writing or diary studies. They need to be careful about their presence and avoid being an intruder in the setting under study, or the natural phenomenon. Studies suggested that researchers develop relationship with participants and do regular, persistent observation so that participants eventually feel that the observation, or the audio- or video-tape recording is a part of the setting (Angrosino & de

Perez, 2000; Johnson, 1992; Warschauer, 1999). Their familiarity can deepen the research findings. In addition to the note-taking, the audio/video tape recordings, students' writing such as notes to each others or their class assignments, written computer discussions, peer reviews of papers is also included in this category of naturalistic observation.

The elicitation of information is the technique that includes interviewing, verbal report, and collecting existing information. Interviews can be structured, semi-structured, or unstructured depending on the objectives of the study. If it is for a specific set of information that researchers expect to obtain, the structured interview would be appropriate and least time consuming. If researchers find it necessary to keep the interview within the scope of their interest and at the same time, leave some margin for participants to voice their own, then the semi-structured initiate is appropriate. This type of interview has a strong point of the effective interaction between researchers and participants. In case that researchers may have ignored or been unaware of some interesting themes, participants may offer some insights that are useful for the study. The last type of interview is the unstructured interview. It is suitable for the longitudinal study in which participants have freedom to express themselves and react to researchers' open-ended questions without being under researchers' authority. The unstructured interview usually is time-consuming but the purpose is to enhance participants to reflect on issues that are significant to them.

In addition, another method of data collection can be gathering existing information pertinent to their research questions. It may include the course syllabus, descriptions of the program, learners' academic records, their demographic data, the test

scores etc. Hartle-Schutte (1988 cited in Johnson, 1992) used the test scores as a source of data to triangulate the "official scores" with his observations of each of his students' literacy activities and achievements.

This study was conducted mainly in the qualitative framework and partly with the quantitative design. It involved five participants from the pre-medical program of a Thai university who registered one of their two compulsory English courses, English for Pre-Medical Students I. This research was conducted in one semester from June 2002 to October 2002, yet, the process of memberchecking ended in March 2003. The participants' performance in the Internet-integrated EFL learning environment was profiled through my journal dialogue, messages from e-mail, mailing lists, interviews, and students' writing samples. With these collected data, the research qualitatively examines the participants' perceptions of their performance in English class at the pre-university level and in the Internet-integrated EFL learning modes at university level. It also quantitatively investigated the participants' syntactic complexity in their writings.

Following are the research questions.

1. What are their perceptions of English learning and writing, and of the Internet at the pre-university level?

2. From the participants' perspectives, which of the context/environment enhance their writing development? What are the conditions that affect the participants' writing development?

3. Do the participants' perceptions of English learning/writing in the Internet-integrated environment have impacts on their writing processes and their products? If they do, what are they? If they, do not, why do they not?

4. What are strengths and weaknesses of the use of the Internet in the English class as reported by the participants?

3.1.3 Research Site

I conducted this research at Kasetsart University (KU), Bangkok, Thailand. Kasetsart University is one of the best universities in terms of academics and technology development. With fourteen colleges, it offers bachelor, master and doctoral programs to approximately 25,000 students. Including in the university policies is one that aims at developing the potentials of becoming a well-recognized e-university at the international level, Kasetsart University has established a dynamic computer center to facilitate teaching, learning as well as researching in the local and global environment with many computer laboratories and services. At the present stage, research on how to optimize learners' learning development in all content areas including English is the university top priority. This study complimentarily serves the university needs and my interests and it is for students' benefits.

My selection of Kasetsart University as the research site was also due to my being an insider of the institute, an instructor at the university for over a decade.   Having taught English at the bachelor and master levels at Kasetsart University over the period of time enabled me to access the participants and facilities required for the research. At first, I planned to use the newest digital laboratory at the Faculty of Humanities which was supposed to be completely implemented before my site entry. However, the plan did not turn out as expected. The digital laboratory postponed its opening. Other university computer laboratories were booked up for many short training courses, or did not meet the participants' study schedule. It was not until the first week of that semester that I

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finally found a brand new computer laboratory at the Faculty of Science. Through

contacts between the deans of the Faculty of Humanities and the Faculty of Science, I

obtained permission to have a computer lab for the class. I could specify the class

schedule that facilitated access to the Internet conveniently, and obtain space to construct

the course Web site, and get technical supports from the faculty technician and from the

KU Computer Center. Finally, I felt relieved to find environment very supportive to my

research.

3.1.4 Pilot Study

I conducted my pilot study on the use of the Internet of students at the Kasetsart

University Self-Access Language Learning Center (KUSALL), during June-September,

2001. The aim of this study was two-folded. First, I intended to examine students'

activities on, their perceptions toward and their problems with the Internet. Second, I

wanted to gain field experience of research procedure as a qualitative researcher in the

prospective research site.

KUSALL consists of four corners for listening, speaking, reading and writing

with 30 computers linked to the Internet. Its members could come to the center at their

convenience. Handouts, guidelines to applications of machines such as the computer and

cable televisions, learning materials, keys to those materials, video-cassettes, CDs are

provided.

I did observations, interviews and a small survey at the section of computers. I

started my pilot study as a pure observer (Gold, 1958). I took fieldnotes of Web sites

students frequently visited and of activities they did on the Internet. After obtaining

some data, I interviewed two students twice. With the data from the observations and the

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interviews, I constructed a survey asking 18 informants regarding: (a) their applications

on the Internet, (b) the frequency and duration of using those applications, (c). purposes

of using the Internet, (d) Internet and language learning, (e) the participants' perceptions

of writing on the Internet and English writing assignments for the teacher, (f) their ideal

interlocutors on the Internet, and (g) their problems with the Internet.

From the preliminary analysis of the data, I found that most of them (a) used

email, Web sites and chat rooms; (b) visited Web sites to search for new or interesting

information and familiarized themselves with English about one to two hours each time

between two to four times a week, (c) enjoyed their freedom to interact with others in

Thai and/or English in asynchronous and/or synchronous modes, and enjoyed reading

what they wanted in the readable format of multimodal orchestration of text, pictures,

sounds, video clips etc. (New London Group, 1996) with links that widened and

deepened their scope of horizon, (d) found they became more creative, and they could

write with many symbols in addition to the textual format, and (e) preferred

communicating with native and non-native speakers of English. All of them welcomed

the idea of integrating the Internet in English courses. What most found troublesome

were (a) using search engines and (b) time used to download each Web page.

In terms of research process, I tried three roles of a pure observer, a participant

observer, an interviewer with the open questions and with the semi-structured questions.

Acting as a fly on the wall for observation enabled me to understand the students' natural

patterns of the Internet use while I could note down the on-going event. Being a

participant observer, on the other hand, did not allow me time to do the notes promptly. I

learned to do my fieldnotes within the same day; otherwise, some data would fade away.

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As an interviewer, I constructed a two-part interview, beginning with the unstructured and then with the semi-structured formats. On the part of the unstructured question interview, it was time-consuming and difficult to keep the students within the framework of the study. The semi-structured interview part was better. The students and I could negotiate and interact with them in the way that I could put my interest in focus and provide some space for them to respond to those semi-structured questions to the extent they found relevant. This type of interview suggested some patterns of which I had not been aware such as the appropriate time to access to the Internet so as to avoid heavy cyber traffic.

3.2   Data Collection

To obtain thick description of the participants' perceptions of English and the Internet, I followed use of multiple data sources throughout the stage of data collection by Lincoln and Guba (1985). The sources were interviews, messages from e-mail, mailing lists, interviews, and students' writing samples.

3.2.1 Interviews

I conducted semi-structured face-to-face individual interviews with the participants (Appendix D). The interviews were constructed on the basis of the data from observations, my fieldnotes and reflections of earlier events in conjunction with the scope of the research questions. The type of interview enhanced me to limit myself within the scope of my study; yet, I kept space open to themes initiated on the part of the pre-medical students as well.

The interviews were scheduled according to the students' availability. Usually, they were face-to-face interactions conducted in Thai for 40-60 minutes, and sometimes, they were telephone or electronic interviewing. I made attempts to transcribe the interviews by the end of the day or the following day. Fresh memory from the activity in the field helped remind me of the interviewees' facial expressions, their voices and tones and the contexts of interviews, all of which had impacts on my interpretation and richness of data in the later stage.

Interviewing

In the first interview, I aimed at getting to know their background information and their perceptions of English, English learning/writing at the pre-university level, and their perceptions of the Internet. That was our first one-to-one meeting during the first two weeks of the semester. With their consent, I tape-recorded our conversation. From my observation during the first interview, almost all of them felt nervous when talking to me with the recorder on. They spoke softly with short answers. Some of them even trembled and sounded stuttered. My first guess was that they might not be comfortable with the recorder so I turned it off, and took notes instead. That helped a little bit. I still felt the participants still being tense. That evening I tried to recall what had happened during the interviews. From my fieldnotes of self-reflections, together with the students' voices, their gestures, and word choices, I felt that there was a distance between us. I speculated that it might be due to our student-teacher social hierarchy, our researcher-researched relationship, our unfamiliarity with each other or the participants' character of

being reticent. I knew that whatever the cause might be, I needed to develop rapport and gain the students' trust (Lincoln & Guba, 1985) the soonest I could both in classroom setting and the virtual setting.

In classroom, I taught students and facilitated their learning with enthusiasm, kindness, friendliness and flexibility. I addressed them by nick-names after getting to know them via their autobiographies to strengthen our bond. Also, I encouraged them to reach me through appointment, email, my office and home telephone numbers if they needed help. In the cyberspace, I emailed the participants asking them questions in the hope that such an informal setting without face-to-face encounter might enable them to be relaxed to communicate with me. They replied my messages in English, giving me more information and started communicating with me via emails regarding learning problems, and personal issues. Our interactions in both settings speeded up the development of rapport between my students and me, the researcher and teacher. They became open and talked freely and fully. One participant even confessed his first impression on me during the first two weeks as a strict, rigid and traditional teacher, judging from my picture at the back cover of the course book. With trust and confidence I gained, in later interviews, we interacted in courteous, friendly and pleasant manners (Fontana & Frey, 2000). I could audio-tape our conversations and collected thick description.

The first interview lent me a magnifying glass that enhanced my understandings of my participants and challenging data collection procedures. The insights prepared me for the next three interviews that I would examine the students' feeling for English, English learning/writing development and their perceptions of the Internet. It was

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necessary that before each interview, I reviewed my fieldnotes and interview transcripts. The review enabled me to see which parts of the findings from the earlier interview needed confirmation, clarification or details. Also, it helped me to work on follow-up questions, adjust, modify or change the pre-set questions for following interviews. This stage also allowed me to do member checking to assure reliability.

Transcribing the Interviews

As earlier mentioned, I audiotape recorded the interviews within that day or the next day. I found that the process of transcribing the interviews was time-consuming and labor-intensive. A 30-minute interview took me approximately 150-180 minutes. During the transcribing process, I took short notes regarding possible or recurring themes, my feelings, the interviewing contexts, and research problems at the side margin. I also put question marks at the side of some parts of my transcripts. The notes and marks acted as a helpful reminder when I did my rereadings for further investigations as well as for data analysis.

3.2.2 Observation

"Going into a social situation and looking is another important way of gathering materials about the social world" (Denzin & Lincoln, 2000). The purposes of my observation were two-folded. One was to investigate the participants' learning/writing behaviors and their interactions with peers in the naturalistic setting of Internet environment.   The other was to construct "hard evidence," that would assure consistency and validity (Adler & Adler, 1994), from combining the data with other evidence: interviews and other documents.

The two settings that I observed were the computer laboratory and the virtual setting. In the computer laboratory, I walked around to observe how the medical students worked with the Internet in order to interact with online texts and the Triampaet group members, what writing or technical problems they had, and how they felt when being online as expressed by their facial expressions, laughter or discussions with their peers. On the other hand, in the virtual setting, I checked the frequency of the participants' emails to me and their posts in the asynchronous Triampaet discussion group and postmarks of their messages.

While I observed the phenomena and their contexts in the computer laboratory setting, due to the time constraint, I took a short note of what was going on at the moment. After each session in the computer laboratory was complete, I expanded those short remarks in my fieldnotes. I also did self-reflections to evaluate my roles and maintain my balance of not 'going native', the stage in which the researcher immerses oneself in complete membership of the participants' community.

3.2.3 Documents

Documents collected for this current research consist of the report on all pre-medical student English entrance examination scores, examples from their group homepage construction projects (see Appendix E) and the participants' first and last pieces of writing (see excerpts in Appendix F), and their emails to the teacher.

The report on pre-medical students' entrance examination scores provided me with information on the students' English proficiency. Examining the scores, I pre-selected ten prospective participants. Combining the evidence from this report with their demographic data, I decided to select five participants under the conditions of their

different English proficiency justified by the scores, and their experience with the Internet. The course syllabus introduced in the first session described the course management: classroom and computer laboratory activities and course evaluation. The participants could also get access to the syllabus via the course homepage. The documents gathered for probing the medical students' writing development with regard to syntactic complexity were their first and last piece of writing together with their homepages.

These documents provided me with insights into the students' continual writing development, their perceptions of writing processes and products as well as the writing development analyzed quantitatively. I could trace what was going on in the participants' mind when they were writing in terms of content, linguistic elements, text organization, and problem shooting. The data allowed me to examine their writing pieces with clearer pictures as each was used to supplement one another. At a larger extent, they worked well with interview transcripts and the observation fieldnotes in projecting the essence of this current study.

<p style="text-align:center">3.3   Data Analysis</p>

In the qualitative framework, data analysis is an on-going process in search of emerging themes grounded from the collected data (Miles & Huberman, 1994). In the process, I studied the data through reading and rereading of the interview transcripts, my fieldnotes, and documents.   Key words and phrases were highlighted and marginal notes were taken. I, then, labeled notable segments of data with themes which were partly guided by the current research questions or derived from key words in those segments.

As more reviews of data were made, more themes from new sets of data emerged. I needed to go back to the raw and preliminarily analyzed data for re-examination in comparison with most currently analyzed data. This brought me to see that some themes were repetitive while other themes needed combined with other related themes and labeled as a new theme. During the process of analyzing and condensing data, a Thai experienced bilingual professor of English with a Ph.D. in Applied Linguistics from New Zealand helped me examine my categorization. This peer-debriefing helped decrease the possibility that the current study would be researcher-centered and at the same time it promoted trustworthiness/validity.

For the quantitative part of examining the syntactic complexity, I manually counted words in T-units and errors of each participant' two pieces of writing. In addition to counting them, quantification of average length of T-units, percentage of error-free T-units and percentage of T-unit with dependent clauses , a way to measure if the students used more sophisticated sentence patterns in a course of time, were performed.

In the part of scrutinizing syntactic errors, a native English speaker with experience in teaching English writing in a U.S. university and I rated the participants' writings. In case of disagreement, we discussed for resettlement. Again, two raters were applied in the current study for trustworthiness/validity.

A worthy remark with regard to the interview transcripts is that I asked the participants to do member check of the data interpretation of the Thai version.

Afterwards, I selectively translated the portions which were relevant to, and directly and immediately- related to the study. The same professor who worked with me in the categorization reviewed the translations for verification.

3.4   Trustworthiness

In conducting the qualitative research, the question of subjectivity and validity is inevitable. To assure trustworthiness of the findings, this current study follows three criteria recommended by Lincoln and Guba (1985): prolonged engagement, persistent observation, and triangulation. According to time spent in conducting the research, the phases of data collection and data analysis took me approximately 11 months. In addition, I triangulated data sources and methods. Data sources included students' writing assignments, interview transcripts, my reflexive journals and fieldnotes. The methods employed in the study, namely, observation, interviews and document analysis, also helped me verify my data and findings. In an attempt to secure in-depth understanding of the phenomena under study, a professor of English did peer debriefing with me at the phases of collecting and analyzing data, and to verify my selective translations. Relating the quantitative part, the findings of the participants' writing performance were also examined by an English writing expert.

CHAPTER 4

FINDINGS

This chapter presents findings derived from sets of data collected via interviews (face-to-face, email, online chat and telephone conversation), observation and investigation of participants' writing samples during a period of 16 weeks (one semester). They are organized in accordance with four sets of research questions regarding the participants' perceptions of English learning/writing in the Internet environment and its effects on their writing development. The questions are as follows.

1. What are the participants' perceptions of English learning and writing, and of the Internet at the pre-college level?

2. From the participants' perspectives, which of the context/environment enhance their writing development? What are the conditions that affect the participants' writing development?

3. Do the participants' perceptions of English learning/writing in the Internet-integrated environment have impacts on their writing processes and their products? If they do, what are they? If they, do not, why do they not?

4. What are strengths and weaknesses of the use of the Internet in the English class as reported by the participants?

In response to these questions, I organized my findings in the form of themes and subcategories that emerged from the collected data. Though such organization promoted clarity of each individual part of data, those themes and subcategories generated to answer the four research questions were interrelated to form a large organic entity. Discussions on one topic, thus, may have transgressed the boundaries of others inevitably. Yet, the transgression did not affect the chapter overall unity.

In addition to categorization of data, I intended to project the voices of my participants. To meet the goal, I used quotes of 2 distinctive types: those directly taken from the participants' English written artifacts: portions of emails or online chats, and those from interview transcripts translated from Thai into English by me. When necessary, I provided supplementary information to clarify the participants' statements in brackets. These quotes take the form of italic fonts. From time to time, I paraphrased the participants' accounts.

The last remark I would like to make here is that the quotes employed in this chapter may represent the participants' voices singly as well as multiply. In other words, some quotes can echo voices on a behalf of one participant. Meanwhile some may represent multiple voices.

The following part is the description of the English class for pre-medical students under the study. It is based on my observation fieldnotes in which I recorded the class surroundings, activities including interactions between the teacher and learners, as well as those among learners themselves. The other sources of data were my journal which carried my own reflections on daily class, and the participants' reflections via interviews.

4.1 Classroom Context

This class was the first of two English classes compulsory for pre-medical

freshmen. Its aim was to familiarize learners with essential text elements commonly

found in texts of their field through reading and writing activities. The class met every

Monday, Wednesday and Friday for 50 minutes each time i.e. from 9:00-9:50 a.m. On

Monday and Friday, it was held in an ordinary classroom where (I) the teacher took the

floor for class instructions. Learners learned language foci commonly found in texts of

their fields e.g. classification, comparison-contrast, cause-effect, instructions etc. Every

two weeks they were assigned to write a small text on topics of their fields such as 'the

heart', 'blood vessels', 'kwarshiorkor and marasmus' etc. to practice use of those foci and

given feedback on their language use. On Wednesday, learners worked in the computer

laboratory individually or collaboratively. In this setting, learners assumed a prominent

role in their learning while the teacher walked around, offering assistance upon request.

In the computer laboratory, learners spent time doing activities such as reading

online texts, posting their messages to the Triampaet group, literally translated as "the

pre-medical student group", searching the Internet or retrieving information. Activities

on the Triampaet group aimed at engaging learners to interact with their peers online. In

this setting, feedback were not provided.

For group project, students formed a group of four and selected a topic of their

interest to construct a homepage to be published on the cyberspace at the end of the

semester. They could set their own themes of the project and present it in their own

design. Along the process of their homepage construction, they could seek for advice

from the teacher and technical assistance from the computer lab. The following is the

course syllabus and details of class activities as appeared on the course homepage.

COURSE SYLLABUS

355-114 English for Pre-Medical
Students I
Department of Foreign Languages
Faculty of Humanities
Semester 1: June 3-September 20,
2002
Course Homepage:
http://pirun.ku.ac.th/~fhumpsm

Asst. Prof. Pornsiri Muangsamai
Office: 320 English Language Division
Faculty of Humanities
Office hours: M-W-F: 9:00-11:00
Or by appointment: 579-5566-8 ext 320
Email: mpornsiri2002@yahoo.com

Course Description

English for Pre-Medical Students aims at enabling students to read technical

English passages from textbooks, journal articles and newspapers effectively. Writing

will be used as a tool to reinforce students' learning outcomes. Students will be

introduced to English rhetorical organizational patterns: classification, definition,

instructions, processes, cause-effect, comparison and contrast, together with reading

strategies, technical terms and practices that would lead them to transfer the information

to concept maps, tree-diagrams and tables. Students will have an opportunity to engage

in a web-based project via accessing links of their interests and reflecting the information

they have gained from their exposures to those authentic texts.

Course Textbook:　　Muangsamai, Pornsiri (2002). English in Scientific Context.
　　　　　　　　　Bangkok: Kasetsart University Press

SCORING

Mid-term Examination	35%
Final Examination	35%
Project	20%
Class Activities	10%

Grading

A	86-	C	66-70
B+	81-85	D+	65-60
B	76-80	D	59-55
C+	71-75	F	54-

Course Schedule

Unit	Topic	Language Focus/Reading Strategies
1 Wk 1-2	Conference Identifying Groups WWW: Colonoscopy	Focus A : Contextual Reference Focus B : Classification Focus C : Context Clues
2 Wk 3-4	Recognizing Definition WWW: CABGS Triampaet: Cloning	Focus D : Definition Focus E : Understanding Complicated Sentences Focus F : Prefixes and Suffixes
3 Wk 5-6	Learning How to Carry out Processes WWW:Hypertension WWW: Migraine Triampaet: Death/Beauty	Focus G : Instructions Focus H : Prefixes and Suffixes (Cont.)
4 Wk 7	Finding out Processes Triampaet: Patients for Practice No computer lab: religious holiday	Focus I : Linear Process Focus J : Passive Construction Focus K : Cyclical Process
Wk 8	Mid-term examination	
5 Wk 9-10	Identifying Causes WWW: Sleep Disorders WWW: Aids, Stem Cells, Cancer, Body Building, or Massage No computer lab in Week 10 due to University conference on its status	Focus L : Cause-Result Focus M : Skimming

6 Wk 11 -12	Identifying Results Triampaet: Confidentiality Making mistakes	Focus N : Result-Cause Focus O : Scanning
7 Wk 13-14	Recognizing Similarities and Differences Triampaet: Withholding the truth Breaking bad news	Focus P : Comparison : Similarities Focus Q : Contrast Focus R : Summary
8 Wk15	Consolidation Triampaet: Telling the truth	Mixed
Week 16	Final Examination	

As a participant observer, I noticed differences between learning in classroom and learning in the computer laboratory. It seemed that learners felt more relaxed to interact with classmates or the teacher in the computer laboratory more often and at their own pace. When they had problems, ranging from technical to linguistic ones, they would seek for help. The participants' requests for assistance could be commonly seen in the computer laboratory rather than in the classroom. The differences might result from the way the two settings were arranged. The following is the figure that shows both settings.
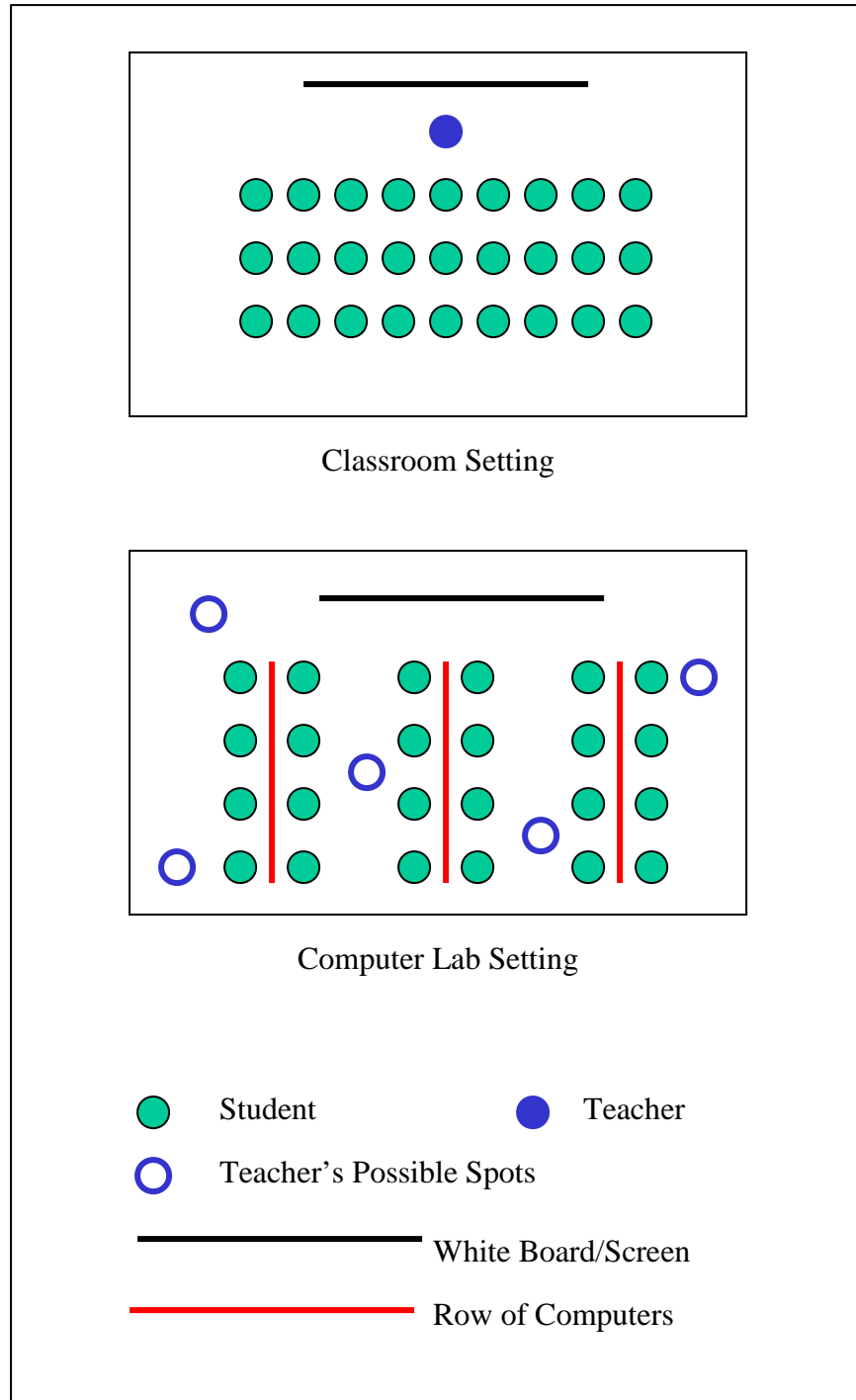
Figure 4.1 Classroom and Computer Laboratory Settings

In class, the white board was in the front while all students sitting facing the board. The teacher usually was at the front of the class. On the other hand, in the computer laboratory setting, the screen was in front. Students sat facing computers. The teacher could walk around while students could freely move.

The participants said that in the computer laboratory they felt comfortable to address their problems to their peers sitting nearby or to the teacher without confrontation to the whole class. Moreover, it was the environment for learner-centeredness, not the teacher-centeredness. So they could focus on what they wanted to learn and to write rather than what the teacher would teach them.

4.2 Demographic Data

The participants of the current study, aged between 17-20, were five male first year university students in the medical program. They were selected to participate in the research on the bases of their different English proficiency levels indexed by their English entrance examination scores, and of their basic computer skills essential for Internet activities integrated into the English course under the study.

Ken

Ken, 20 years old, graduated from a high school in the eastern part of the country. In school, he shone in academics, personality, and social activities. In 2001 and 2002, he was awarded the best academic record student of his school, and in 2001 the good

behavior student. In addition, in 2001-2, he was voted president of the school health promotion program. After graduating from high school, Ken applied to study medical science at a medical institute.

His background in academics, personality and social interactions prevailed in our English class with the Internet. Messages he posted to the Triampaet group revealed his thinking and writing development. From mostly cut and paste look at the start, Ken could gradually generate his own content based on his background knowledge, experience and later in mixture with research on the World Wide Web. He paid more attention to how to convey his messages to readers which enhanced his development of authorship: establishing purposes of writing, contemplating the writing techniques that facilitated his readers' understanding and triggered their interests etc. The Internet became his additional channel for his intellectual growth in three main aspects---English language use, biological and medical sciences, and electronic literacy despite the fact that he had no computer of his own and needed to rely on the computer either at the university or the cyber cafe out of his hectic study schedule. Ken could overcome his frustration of a lack of computer at home, and difficulties in electronic literacy. In turn, he could build positive attitudes towards learning in the Internet environment.

This made Ken's virtual visits from the English course homepage to a distinguished West coast US university with one of the best renowned medical institute in the world become real when he was awarded a full-support scholarship to pay a three-week visit to the university. Ken's project on alternative treatment of cancer was accepted as the best of all ever since the program was founded.

Po, 17 years old, is one of the two top scorers in English in the medical program entrance examination. He graduated from one of the best high schools in Thailand. Po studied English for 12 years before entering the university. The foci were reading and grammar, the two English classes ordinarily offered in Thai schools even though the communicative approach was the framework of English education in Thailand. For writing, he didn't practice much in the formal class but had a chance to do writing (grammar-based) exercises outside class from a book he found very useful for his writing development.

Po experienced a mixture of feelings in participating in the Triampaet group discussion. In our Internet-integrated English class, Po's messages became good writing models for many peers. They reported that his grammar and word choices expressed his ideas clearly. Po himself commented at the beginning of the semester that he had vocabulary limitation and later said he acquired more and attempted to use it as much as possible in composing texts.

While a number of Triampaet group members could select what to learn from Po's messages, Po stated that he learned some expressions from some peers' texts. To illustrate the point, Po further explained that some of his ideas which were similar to his peers' were expressed with different terms or structures and he could learn from the differences. That helped him push against his limits. Another good point that Po observed from his peer's responses to his message was his awareness of essence of communication i.e. how to put ideas into words of a foreign language, and how to

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enhance readers' comprehension to avoid confusion, misunderstanding and incomprehension. When he wrote, he did it with care, trying to avoid communication breakdown.

Meanwhile Po made a couple of remarks on his peers' messages. He mentioned that he recognized among his peers' texts from which he could select good points in writing; yet, he also noticed ungrammatical language uses. Moreover, he thought that some friends' ways of writing were inappropriate. His examples were some friends' using, in their English texts, Thai words to end a sentence like 'na' (no meaning but used to express the writer's insistence) in *"...don't forget that you still have friends, all of us willing to help you **na** Turk **na** !!!"*

In addition to his peers' messages, Po also commented on topics for discussions. In his opinion, some such as "beautification by a doctor" did not make anyone any good. He asserted that everyone had his/her right to look or choose to look the way they wished. Their appearance did not yield negative or positive impacts on anyone. So discussing the topic did not lead to any constructive outcome. On the other hand, topics such as "Right to Death" meant many things for different groups of people such as the patient, his/her relatives, the doctor and medical students. He enjoyed exchanging messages on such topics with his peers to learn and share information of what had happened in reality and what they thought about it.

Seemingly, Po enjoyed Triampaet group activities. He perceived that online discussions were interesting when topics were thought-provoking. *"I got many good ideas I had never thought about from the group members' messages."* He gained some new words and English structures from others and tried using them in his following

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pieces of writing. What he liked least were messages with some Thai words written in those English texts, "unproductive topics" for discussions, and grammatical errors in his peers' texts.

Unlike the online discussion, Po could learn more in terms of both content and English language in use from his favorite assignment, constructing his group homepage on cancer. From the English for Pre-Medical Students class, he acquired knowledge of sentence structures together with other language foci and could reinforce them in his language acquisition process when reading online texts about cancer and coming across those foci. From those texts, he gained ideas of what good writing was such as clarity from his encounters with many difficulties such as technical vocabulary and complex structures. The experience made him concerned about authorship. Po stated that he wanted to share what he had learned about cancer with other students by writing in reader-friendly ways. He defined difficult technical terms, used concise English and organized ideas systematically. His pre-(brainstorming with his group members, outlining the project, and designing the organization), during-(rereading and revising his written texts) and post stages of writing (editing) showed his attention to his writing quality. The one-semester project impacted his English writing as a writer and editor and formed his passion for it.

Turk

Turk, a 19-year-old pre-medical student, was an easy-going, self-confident and lively person. He graduated from a demonstration school, which could experiment new

techniques with learners to promote learning efficacy. Turk was the only participant who was exposed to the computer and the Internet in a formal computer class in high school. He had a computer at home linked to the Internet with a modem.

Turk's English was fair. He liked it for its advantages to his study and career life. Turk stated that the Internet-integrated English class required him to be more careful with his English writing. For him, he enjoyed reading his friends' messages posted to the Triampaet group. In this setting, he did not care much about structures and grammar both in reading and writing. He looked for the content of the message rather than its linguistic forms. As a result, reading from peers did not have many effects on his writing development. Yet, in conveying his messages to them online, Turk said he tried his best to give information to readers as much as possible provided that he had sufficient time. To illustrate his points, Turk referred to a long text and said that he gave much information to his readers in order to lead them to the full understanding of his ideas. He also pointed out his short text, saying he did not have much time to write due to assignments of other courses.

In terms of his Web site project writing, Turk was more careful than posting his messages to the online discussion group. Due to the same experience with Po in having difficulties when gathering online articles or texts on Web sites, he set a good plan in order to present his group project. Turk submitted the outline of his group writing to the teacher with a clear purpose of giving audiences self-instructed guidelines of body building. After generating what problems he encountered when reading online texts from other Web sites, he decided to provide his readers with illustrations of equipment with

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their English names or pictures of each posture so that they could follow his instructions appropriately. Turk also took the role of a project co-editor to examine the group language use and the Web page contents.

Kang

Kang, 18 years old, is another person who graduated from a demonstration school. He was one of the best from his school. Kang loved teaching especially biology to his friends. After graduating from high school, he made it his routine to visit his school weekly to tutor his juniors to enter the medical program of this medical college. His love for medicine and teaching inspired him to be a medical professor. In his biography, he had a strong will to work upcountry. *I don't think I'll work in Bangkok. Because in the country, people there need a lot of teacher and doctor. I would like to fill the gap between the capital and upcountry. I'll do it for the future of Thailand.*

At the start of the semester, he said that he did not like English because he could not understand what it was all about. One semester after another through his school life, he learned English grammar repeated over and over again even though it was of different and more difficult level each time. He did not need it much for his academic records and all he desired from English learning in school was just to pass English examination.

Unlike English, other core courses for science students such as chemistry and biology, contained new and huge information. They were more challenging for Kang. As of English writing, Kang perceived that he liked it more than before. Writing to the Triampaet group changed the way he used to write in school for grammar practices, activities he got bored of. In this setting, he needed to understand and critically think of the situation with the case given for appropriate solutions. This type of learning contexts

stimulated his eagerness to write and discuss with others. He gave an example of discussion on the topic of Telling the Truths (to patients). Putting himself in the role of a doctor who had to make a decision of whether or not to tell bad news to his patient, he said he generated possible choices and their positive and negative outcomes. Then, he weighed them and started to deduct one after another till he reached the best solution. Kang said such an activity was very challenging and worth-writing.

Another change when he wrote an English text was that he increasingly relied on English expressions that he said he unconsciously collected from reading texts on Web sites and they came to his mind at that moment of writing. To him, traces of direct Thai-English translation gradually lessened. He thought he gained more vocabulary and English structures from reading online texts and using them to express his own thoughts through meaningful activities.

Ek

Ek, 18 years old, described himself as a very quiet, polite and hard-working student. He graduated from a public high school where he shone as a bright young guy among his friends. In his autobiography, he wrote, "*My homework were always copied by my friends.*" Ek contended that at school, he loved mathematics, the subject of which his entrance examination score was 88/100. With confidence in mathematics, he contended that he was certain that he would get Grade A in Calculus in the first semester at the university level. Biology and chemistry were another two favorite subjects of his. When talking about his English classes in school, Ek said he had lost interest in English

long time ago because he did not understand it much throughout his 15 years of studying it. He was not good at it and his English entrance examination score was the lowest among all the pre-med classmates.

From my observation fieldnotes and interview scripts I found that Ek did not have confidence in his English. This affected his participation in the Triampaet discussion group as well as his group Web site project. Even though Ek liked writing an English text online because he could get access to his contacts anytime and any place where the computer with the Internet was available and because he could review and revise his messages as many times as he liked with Microsoft Word editing tools, he did not like posting his messages to the Triampaet group. Ek did not want his peers to read his messages. Instead, he felt secure to submit them to the teacher and asked for her feedback. When he was assigned to discuss medical ethic issues with other Triampaet group members, he posted his messages and chose to discuss those issues with his close friends in class.

Regarding the WWW activities, Ek was positive with online texts selected by the teacher from the Medline Plus. It was easy to read and understand them from pictures, animations, and writing styles. However, when he needed to search for articles or texts for his group projects, long texts he found on the Internet intimidated him. After a couple of trials to push himself to read them, he gave up. His contribution to his group was Web page design.

When he was asked if he viewed any changes in his English writing after one semester, he said that he perceived very little of writing development.   At some points, he thought it was better because he could read and write in English without thinking in

Thai except when he came across difficult concepts. Yet, sometimes later, he found that his writing based purely on English was not as good as when he wrote in English after thinking in Thai. The comparison of his first and last pieces of writing showed otherwise. There was improvement in terms of syntactic complexity and organization of ideas. It could be speculated that the development might have been influenced by his attention to structures and language foci instructed in class rather than his online activities. Evidence could be seen in three contexts. In his last piece of writing, it seemed that he attempted to use structural patterns in the course book e.g. cause-effect identified by 'cause' and 'thus'. Additionally, as discussed earlier, he took care of homepage construction, not data collection through Web searches or homepage writing. Also observable was his behavior in the Triampaet group. Ek was quite cautious of his interactions with others due to his concerns about his messages which might have misled others and caused misunderstandings.

Described above were the participants' pictures portraying their continual studying of English learning/writing development. The following are the illustrations which display five pre-medical students' information regarding age, the number of years of learning English, and their English proficiency scores based on the assessment from the English entrance examination.

	Ken	Kang	Po	Turk	Ek
Year	9	15	12	10	15
Age	20	18	17	19	18
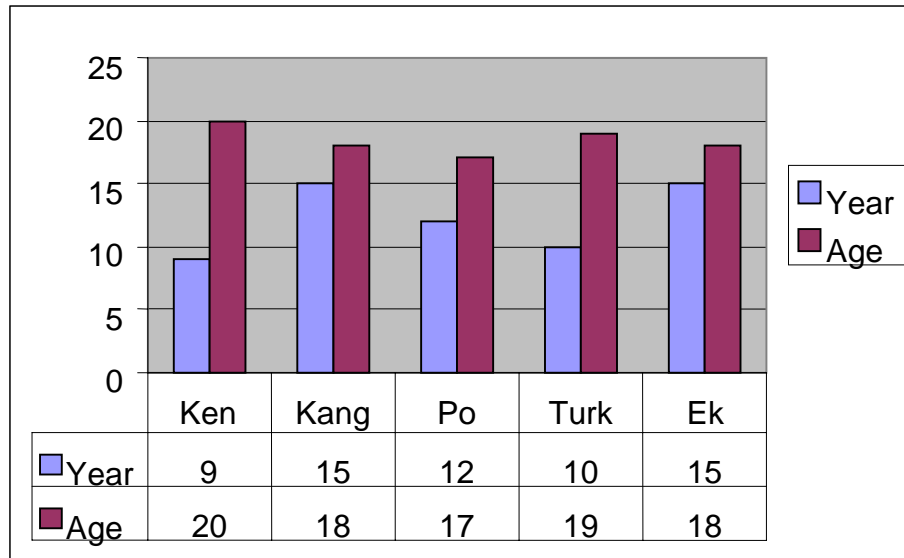
Figure 4.2: Years of English studies and age of participants

Figure 4.2 shows the research participants number of years of their studying English and their age. Kang, Po and Ek started learning the language when they were three to five years old while Ken and Turk, like other students in schools upcountry in Thailand learned English later than those in Bangkok. However, the length of study time did not correlate with their English competence. The following figure reveals their English entrance examination scores.
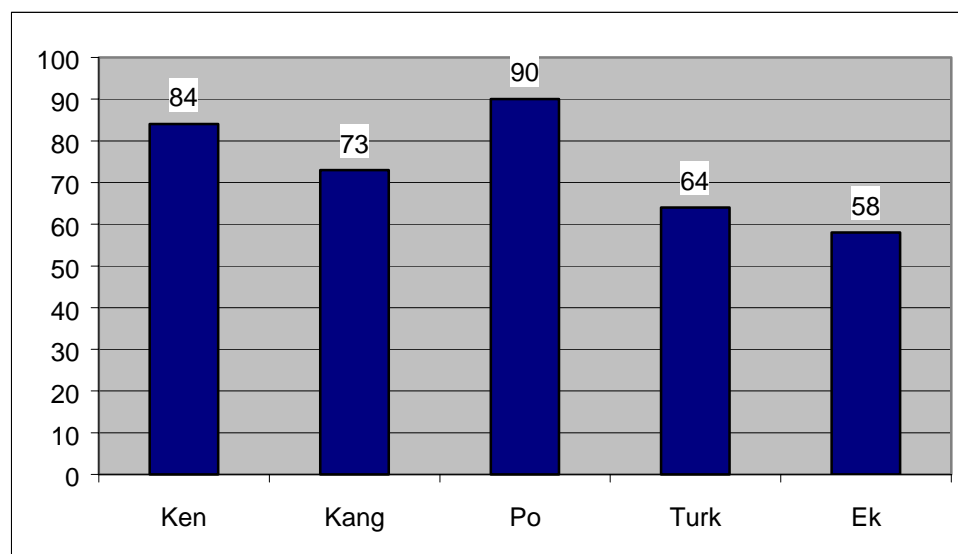
Figure 4..3: Entrance Examination Scores

Ek and Kang, who spent 15 years studying English, were not the first two students with the best scores. Kang was ranked as an average student while Ek was ranked as a beginner among the rest of the class in terms of English proficiency.

Now that we know who the participants were, I would like to proceed to my research questions and the findings.

Research Question 1

What are the participants' perceptions of English learning/writing, and of the Internet at the pre-university level?

In the learning process, it is undeniable that whether and to what degree learners would achieve their learning goals depend much on how they feel about what they are learning. In this part of the chapter, I would describe my findings in two main areas: 1) the participants' perceptions of English which includes those of the English language per se, their past experience in English learning, and their past experience in English writing; and 2) their perceptions of the Internet in the aspects of activities on the Internet and its use.

4.3 Participants' Perceptions of English Learning/Writing
and the Internet at Pre-University Level

4.3.1 Perceptions of English Language Per Se

My first question to the participants was how they felt about the English language. I found that English in EFL contexts meant many things to the participants in the current study. It was the compulsory foreign language required in Thai education. Some participants situated English in a broader context. They viewed it as a medium to access a variety of information, especially for medical studies and career life. Some regarded it as a widely used international language. One participant stated that English liberated him from the voice of the omniscience. Few of them, however, used it for communication with others. If any, its frequency was very low. Below are what English was from the participants' perspectives.

English is a Required Course in Curriculum

All the participants contended that English was required in their education since they were in primary schools. The participants reacted differently towards English in this

respect. Po and Ken welcomed its status as a significant part of their learning, so they worked hard in their pre-university English classes and entered the medical program with high scores in English examination. Turk revealed with giggles that he did not pay serious attention to his study, and that included learning English. Rather, he was interested in playing sports. On the other hand, Kang and Ek stated clearly that they did not like English. It was difficult for them to understand English grammatical system, to acquire its vocabulary and to read English texts with good understanding. Kang and Ek felt that learning English grammar and reading for comprehension was dry, uninteresting and unproductive despite their 15 years with it. All they needed to care about was to pass English tests; that was the best they would struggle for.

English is a Medium to Access a Variety of Information

All the participants were aware that English was widely used to record information of various aspects. With it, they had additional channels to learn subjects of their interests and expand their knowledge. Some of the participants started using biology texts written in English to fortify their understandings of particular topics that they were not clear in classroom learning. Po and Turk disclosed that they explored Web sites on topics such as cancer, sports, music and Hollywood entertainment. Ken signified English as an essential element in life. In his words directly elicited from an online chat, English was

ken: Essential for everyday life
ken: And I would like to have the good skill at this
mpornsiri2002: What's essential?
ken: English
ken: The updated information
ken: Reach every information that I want
(November 21, 2002)

Ken wanted to have good skills at English since the language played an important part for his daily life. Its mastery would enhance his ability to obtain information of all kinds. He believed that English was a very dynamic instrument widely used to reach information. It was a powerful tool for him to access growing body knowledge.

English is a Widely Used International Language

Two participants asserted that English was a most widely used language worldwide. Turk realized that it would be very essential for him when going abroad. So learning it now would prepare him to be ready to communicate with others in English-speaking environment without much trouble. From time to time, he spoke English with his American friend. He reflected that he did not think about grammar. He just spoke it sometimes in words or phrases, not long sentences. He said that when he spoke, it was for the sake of communication. He was not worried much about the forms of English as far as his conversants understood him.

Ken, on the other hand, used English occasionally to communicate with tourists. He liked to discuss different topics with them because discussions helped him learn something new. Talking to other foreigners in English linked his classroom learning with outside class activities.

English Lowers Voice of Omniscience

One participant was aware of his power of learning through his English competence in the Internet setting. He believed that he could get access to scientific advancement through English texts online updated long before its paper-printed version. The participant stated that he could study issues of his interests independently instead of relying on the sole authority. From his experience at hospital with his father, the

participant voiced his frustration as he heard a young doctor addressed his father as if he were in a fatal stage and could not carry his daily activities by himself. Po reflected:

…from my observation of how some doctors took care of my father. One came in and asked if my father could walk. Such a question upset me. My father could move, walk and live a normal life! I assume that by seeing my father, a patient with cancer lying on the bed, may have given that young doctor an impression that my father could do nothing but lie down. From my understandings, he may have learned from his lecture classes or books that the patient with the disease would not be able to do anything else. Some doctors even told me not to let my father exercise! (This) made me realize that learning from books alone was not enough. There I started to search for information on cancer from the Internet. I believe it holds updated data, unlike books (June 19, 2002).

The participant reiterated that English in the Internet settings empowered him to do self-study on cancer, its stages, and drugs that his father was taking. Such research enabled him to gain some insights into the disease, to ask right questions to the doctor, or to check against the doctor's diagnosis. Even though the participant realized that he was a novice in the area, he had capability of learning and knowing instead of being completely dependent on others, even the authority. For him, one should look for more channels of accessing information for self-education, in addition to learning in formal settings. To achieve the goal, he believed that English was an effective instrument.

To sum, from students' accounts above, it is seen that what English meant to them depended much on how they got involved with English. In the cases of Ek and Kang, English belonged to the classroom setting. Though they realized its significance as an international language widely used especially in their field of medicine, they did not see emergent needs of English in real life. Their goal in learning English was to pass the curricular requirement. On the other hand, Po, Turk and Ken related English to another corner of their outside class activities. English knowledge acquired from class enhanced their abilities to make a further step of using it for communication and knowledge

acquisition. With the information on the participants' perceptions of the English

language, it is worth constructing a bigger picture of the participants' past contacts with

English in class. I will address the issue in two parts: their past experience in English

learning and that in writing.

4.3.2 Perceptions of Past Experience in English Learning

Three participants stated that they liked English while two said firmly that they

did not have any interest in English at all. Like other subjects, English learning took

place in class. When the participants were asked about their English classes in the past,

the themes which emerged from the interview data included English components, class

management, and learning materials.

English Components

Grammar, reading comprehension and vocabulary were the three components in

English class foci. The participants learned to use grammatical rules and did pattern

practices. They were required to demonstrate their abilities to use correct grammar.

Mistakes were corrected by the teacher and led to low scores. That made the participants

scared of making errors. As accuracy was critical, learners needed to be careful and

automatically grammar became the top priority of learners' tasks.

While some participants could acquire grammatical rules and apply them

successfully i.e. being able to meet the teacher's expectations, Ek and Kang expressed

frankly that they did not like learning English grammar. Ek said that grammatical points

presented in class were too repetitive, boring and difficult to pay attention to learning

though they were presented in different and more difficult contexts.

Kang agreed with Ek. He said he was aware of how important English was for his content study, and communication, but he found it overwhelming. In an interview, he asserted:

I think I could survive with some basic English knowledge. I mean I know that I would not fail English courses (June 12, 2002).

For reading comprehension, the participants read texts of general topics included in the course book. According to Kang, general topics such as traveling were meaningless to him while topics related to biology would interest him more. Ek and Kang recalled that texts selected for class in school reading were not of their interests. He gave examples of texts from classified, cooking recipes or something detaching from their lives. After reading, they would do comprehension questions usually in the forms of multiple choices or sometimes of question-short answers. In order to do reading activities, they said they scanned through the passage for answers. If it was the question-answer type, they would copy that answer directly. Following the comprehension questions were vocabulary exercises. Those words came from the text they had read but were used in different contexts for practices. They found it hard to understand English texts with unfamiliar vocabulary and complex sentences. Due to their lack of interests in the topics for reading, insufficient grammar, background information and limitations of vocabulary, they found themselves unsuccessful in learning English.

Clearly, such English classes led the participants to vicarious learning of the English system. They may have acquired good grammar or written sentences with good structures. Yet, that is not sufficient. Learners need to move a step further by gaining access to contexts where they could apply the knowledge to different situations in the real world. The language processing procedures require language users to do more than

memorizing its rules or vocabulary. They entail interactive or communicative abilities.
It is necessary, thus, that learners should be prepared to bridge their linguistic
competence to performance.

Class Management

The participants reported that English classes were teacher-centered. For the
participants who loved to learn the language, they revealed discomfort in class under the
strict instructions of the teacher. They argued that it constrained them within a
framework set for all learners where they had no choice to voice their interests and
concerns about their learning. They needed some space where they could take active
roles in their learning.

Ken did not appreciate an English class with this style of teaching and learning.
On an online chat for member-checking, he explicated what it was like to learn in the
class like that.

ken: The class was like Mattayom (Grades 10-12) *style*
ken: that I was bored
ken: we must learn one passage for each hour
ken: that is strict so much
ken: she (the teacher) told me that she will quiz me for sometime
(October 31, 2002)

The quote shows Ken's uneasiness in the class where he played a passive role of
learning through correct answers given by the teacher. He contended that he wanted
something challenging to think and do in order to learn. Simply learning from keys and
then, quizzing, made him bored and depressed.

While Ken complained about his inactive role in class, Po commented on his

teacher directly. His voice echoed anger, frustration and annoyance with the teacher, her inaccurate speculations of learners' language proficiency, and her strict and seemingly unreasonable regulations. In his email, Po complained:

> *This term we learn in a different book which is very hard (difficult). The thing annoy me isn't how hard is the book but it is our teacher. She teaches us like we know nothing. Let me pick some sentences she said:*
>
> *'Oh! I'm sorry I have taught you only present simple tense. In this question we must answer in present perfect tense, sorry. I will tell you how to use it later.'*
> *'When you combine relative clauses, don't delete 'which' or change the voice of it. You haven't learnt that. Should you use it, you will not have the score.'*
> *'If you can't find the main idea, count the word you see most often. It is usually the main idea. See, it is very easy.' Etc. (November 22, 2002).*

The teacher's authority in this context from Po's perspective was detrimental. She was very strict with the scope of the study and the order of linguistic features according to the course syllabus while she was unaware of claiming scores as learning punishment in case of learners' violation of her instructions.

Po further complained in his email message that he needed to learn through his understanding, not remembering without any meaning.

> *I think it is worthless knowing English but not understanding it. Now, we learn by remembering not by seeing by our own eyes. Everything in any language has its reason. The language came from the ancestor transferred from one generation to another. 'Handicap' is come from 'hand in cap'. 'Vandalism' came from 'Vandal race in the early Europe' and also millions of Thai words. If we realize this, we shall understand that why this is used or why that isn't popular, etc. (November 22, 2002).*

While most participants did not welcome teacher's centeredness, one participant thought differently. Ek said the most important thing for him in learning was the teacher. He considered the teacher as the knower who could lead him to the goals of learning. He found it too difficult for him to make progress without the teacher's attention, her correction of his work and all of the feedback. "*I hate not understanding what I've learned. I want the teacher to lead me (June, 2002).*"

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In the learning process, clearly, each individual has different background knowledge and has different needs. It is necessary that what is offered to learners serves their needs. The rigid pedagogy does not allow situated learning but tends to frame learners to the unilateral direction as specified by the curriculum. This could affect their motivation and their learning development (Warschauer, 1999; Freire, 1970). Po's frustration resulted from the teacher's ignorance of learners' English proficiency levels. The teacher's seemingly rigid framework that restricted learners' existing knowledge to the scope as set in the teaching plan is not rigorous or productive. He preferred being in the environment that promoted learning by doing or understanding through thinking processes rather than nonsensical memorization.

Learning Materials

With regard to learning materials, all the participants stated that they learned English from one course book. It normally included grammar points, readings plus exercises for grammar, reading comprehension and vocabulary. For the part of grammar, the component in focus, presentation started from rules and examples to exercises of the word-filling type. For example, "If I ___ you, I ___ change my attitude." The students were also required to write at the sentence level with cue words given and sometimes at the paragraph level. Ek said:

I'm a slow learner of English, not good at it. There're too many rules that I've to memorize and apply. When I write, I need to think of forms, and functions such as "if clause-construction." I might have understood how to apply grammatical rules in writing under guidance of the teacher.

In addition to grammar, the research participants described readings in school in relation to their appearances, topics and newness. Generally, passages were presented with some illustrations that might have suggested the main object of the text. For example, if the topic was about Christmas, then, pictures typically were Christmas trees or Santa Claus. Topics for reading comprehension in the English textbook varied. Common topics were greetings, family, asking for permission, body, numbers, countries, colors, seasons, food, profession and news. Due to being facts, contents in such topics rarely changed over time.

Clearly, the topics were of general subject matters in everyday life. To most of the students, those topics were not related to any discipline in particular. Ek mentioned:

I liked biology but English textbooks in school did not contain a piece of this area. They held general topics such as travel and cooking. I was not interested in them (August 28, 2002).

Another issue that all the participants raised was their desire to read about something current. Ken recalled one of the texts in a course book.

ken: The first lesson comes from Year 2542 (Year 1999) *newspaper.*
ken: and I think we should know more than that.
ken: the practice was rather easy and she (the teacher) tried to tell the correct answer all the time (October 31, 2002).

In term of learning from an English course book, Ken stated:

Everyone in class learned about the same thing and was supposed to know the same thing. I preferred having opportunities to learn from other sources of knowledge as well. (August 19, 2002).
That the participants learned English from one textbook, one teacher, in one learning setting raised a question of whether such a context yielded optimum outcomes in their investment of 9-15 years of English education. It may be appropriate for the

beginning stage of learning for students. Yet, as time goes by, learning environments and learning strategies may become fruitful if they could be pushed against boundaries. Students deserve to establish their learning space relaxing and encouraging enough to grow intellectually through authentic use of what they learn in class in real contexts.

4.3.3 Perceptions of Past Experience in English Writing

With regard to English writing, all the participants agreed that it was not the main focus of English class, unlike grammar and reading which played the key role. This may be because writing was not a part of the university English entrance examination which highlighted testing candidates' reading comprehension, vocabulary, expressions, and grammar. Generally, classroom English writing served as an indicator of the participants' progress in internalizing grammar rules and mostly involved tasks at the sentence level. The participants sometimes wrote at a paragraph level based on an example given and they obtained feedback from the teacher included discrete grammatical points such as use of articles, vocabulary and spelling.

When asked if the participants had English writing problems, all of them stated that they did have many problems.   What they found problematic covered linguistic, cognitive, psychological and thinking aspects as illustrated below.

```
                        ┌──────────────┐
                        │   Writing    │
                        │   Problems   │
                        └──────┬───────┘
        ┌───────────┬──────────┴──────────┬──────────────┐
 ┌──────┴─────┐ ┌───┴──────┐      ┌────────┴────┐  ┌──────┴──────┐
 │ Linguistic │ │ Cognitive│      │  Thinking   │  │  Psycholo   │
 │            │ │          │      │  Process    │  │  gical      │
 └────────────┘ └──────────┘      └─────────────┘  └─────────────┘
```
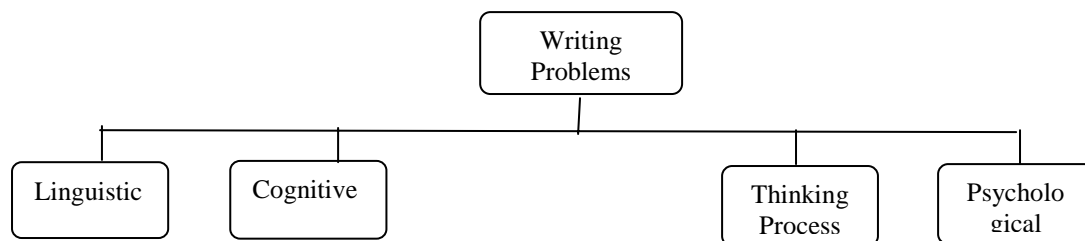
Figure 4.4: Writing Problems

Linguistic Area

This included problems in making use of the English language to express

thoughts. All participants contended that they had limited amount of vocabulary,

difficulties in grammar and in putting complicated ideas into well-structured sentences.

In their learning contexts where the teacher restricted to the focal points, it was natural

for the students to use words or structures they were sure of their correctness. Their first

writings to this class showed traces of their high school writing, considering their word

choices and simple language structures. They said that most of them, when encountering

the circumstances, dropped the complicated thoughts or those they could not find the

appropriate words or ways to represent their ideas. For Ken, he complained at the

beginning of the semester:

I have a lot of ideas to write about but I can't express them all in writing. My
vocabulary and sentence structures are limited. The problem forces me to drop out what
I find complicated to put into words (September 19, 2002).

Because of linguistic problems, many participants pointed that they had to write with same groups of words and structures they had already acquired. They felt they could not comfortably generate their texts with new vocabulary or sentence patterns because there were too many words to memorize and many complicated sentence patterns to internalize in order to compose those words together. Their writing, thus, inevitably looked simplistic. Ken reflected:

The sentence patterns I used can be described as stereotyped, sticking with simplicity (July, 2002).

Po discovered that his vocabulary was limited.

I couldn't find words to express myself the way I wanted (June, 2002).

From the data above, it can be inferred that the participants' linguistic problems may have originated from a lack of motivation during tedious hours of learning grammar without making meaning of it through assignments that required their self-engagement such as writing based on their ideas, experience, background information or interests, a lack of writing practice that should have reinforced their language learning development, including the participants' unfulfilled desire for updated teaching materials.

Cognitive Aspect

Another thing that most participants declared as a difficulty in composition was their lack of information on the topic they were required to write. They mentioned their lack of background knowledge, experience, or interest in the topic. When they encountered the problem, they felt incapable of writing well and their texts were inevitably short and non-informative. One participant asserted,

I couldn't think of the content. In writing, I didn't have information about which I needed to write and when I did, the problem of organization of its content rose. Grammar was the next obstacle for my English writing. (August 12, 2002)

Clearly, the participants found it difficult when they had no ideas of what to write. Generally speaking, in the Thai learning context, each learner learns individually, not collaboratively. After they finished writing, they submitted their work to the teacher for grading. Brain-storming on the topic to write or sharing their composition to their peers is not common classroom practices. Thus, when the problem of lack of information occurred, they could not rely on peers for information exchange.

Thinking Process

When asked what else in addition to linguistic and cognitive elements that was their writing problem, all of the participants considered the thinking process a cause of time consumption in composing their texts. When writing, they spent so much time in thinking what to write and, linguistically, how to write it. One participant said,

I scarcely write an English text. When I do, I can do it very slowly. I need to think about words to use and grammar that would convey the intended meaning. Usually I will think of what to write, two or three ideas at a time and start writing accordingly. If I think of what to write from the start till the end, I will forget the contents of those ideas (July 3, 2002).

It should be noted that this slow thinking process problem took place when the participants were doing the writing. It is difficult to interweave ideas and linguistic elements together. That means they thought of their messages, bit by bit, while trying to compose them with structures they could think of at the moment. In addition, they did not set a plan of what to write and follow the outline accordingly, the process of which would ease their writing difficulties. Under the circumstances when problems regarding language ability, writing strategies and content of their messages occurred simultaneously, the flow of thoughts and the process of transformation of thoughts into words were critically obstructed.

<u>Psychological Area</u>

In response to the question if the participants regarded anything else as constraints in their English writing process, the majority stated that the insufficient linguistic knowledge and the teacher's expectations affected them psychologically. Due to the focus on grammar, they needed to be careful with correctness of structural patterns. That affected their satisfaction of their writing. In an interview, Ken stated,

When I wrote, I felt tense/nervous. I was so concerned about forms and language patterns in my writing. I had to write only this way, within this format. I felt it was like working under pressure and I spent so much time on writing even a three- to four-sentence paragraph (June 29, 2002).

In some types of writing assignments, the participants had to write in accordance with the given paragraph (s). For example, the topic was traveling and the language focus was tenses. The paragraph(s) would contain some terms such as "tomorrow at nine o'clock", "since" etc. Learners had to complete the paragraph(s) and applied the grammatical elements designed for the lesson to their writing.

Evidently, the participants found use of language elements quite difficult. That worried them to some degree already (Horwitz & Young, 1991). With the specified format of the paragraph(s) to fill out, they even felt more stressed because they needed to abide by the set rigid frame while trying to blend their ideas with it. It is not overstated that the participants composed their messages to meet the expectations of the teacher with the absence of their self-engagement, audience, and intention to use language for communication.

Contradictorily, for the participants who had acquired solid grammar base, this problem was not threatening for them. It is because they could meet the writing

standards set by the teacher, accuracy in grammar use. Later discussed in the part of writing development after the use of the Internet were their voices on changes in perceptions of writing from putting emphasis on grammar to content/messages.

<u>Summary</u>

To sum up the perceptions of participants towards English learning/writing, three participants liked English while two did not. The main reasons for the first group were that they found it relevant to their studies and future career and that, to some degree, they related them to their outside class activities. On the contrary, the rest of the participants found English learning boring due to its linguistic system and their limited vocabulary and its irrelevance to their real life. Meanwhile the problems in learning that all the participants echoed were teacher's centeredness and learning materials which were irrelevant to their needs and interests and not updated.

In terms of writing, the participants were not much exposed to English composition writing in the authentic context. What made them concerned about writing an English text included linguistic, cognitive, thinking process and psychological issues.

In the next part, I will present the findings on the participants' perceptions of the Internet. It would also consist of activities that learners performed before their studying at the university level, and their problems with the Internet.

4.4 Participants' Perceptions of the Internet at the pre-university level

4.4.1 Perceptions of Activities on the Internet

In this part, I will present the findings of how the participants felt towards the use of the computer and the Internet before they took the English class with its integration.

All the participants liked to use the computer. All except Ken could get access to it at home and could be connected to the Internet via modem. In addition to the computer and the Internet at home, each participant could use the computer at different places such as at cyber cafes, or at schools. The following were the activities they had experienced.

Categories	Ken	Kang	Po	Turk	Ek
Chatting	√	√	-	√	√
Search	√	√	√	√	√
Discussion Board	√	√	√	√	√
Email	√	-	-	√	-
Games	-	√	√	√	√

Table 4.1: Internet Activities of Pre-med Students at the Pre-university Level

Table 4.1 shows the participants' computer and Internet applications. They broadly knew how to search for information through search engines such as www.yahoo.com or www.google.com, and got acquainted with Thai discussion boards such as Wa Kor at www.pantip.com. All except Po had experience in chatting and emailing (only in Thai) while Kang and Ek did not use email. The following part is the presentation of the participants' engagement in Internet activities: Internet games, discussion on Webboard and Web searches. Discussions on characteristics of their Internet activities will be offered to see their relevance to the English learning class with the Internet. Since email and chatting were the activities that the students did occasionally, they are not included in the section below.

Internet Games

Among those activities, all except Ken spent most of their time playing Internet games. They said playing games such as strategy games was popular among Thai teenagers. They could position themselves according to the situations given and immersed themselves into scenarios as presented with attractive use of multimedia on the computer monitor. It was easy to be addicted to it, though, since many played games days and nights in order to defeat their rivalries, whose playing strategies were unpredictable and required prompt reactions to handle with one another. For Po including almost all the rest, games helped him relaxed and lessened his stress from his tough studies and he was cautious enough not to be obsessed by them.

The game I like is something I want to be (surely I couldn't), such as God games which allow me to be the God, or First-Person-Shooting (FPS) games which allow me to kill my friends for fun. …I shall not let the game control my life and be more careful krub (December 23, 2002).

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It is worth noticing at this point that the participants were attracted to Internet games due to its characteristics of being challenging, thought-provoking, strategy-oriented and entertaining. Players needed to engage themselves into the games in order to be the winner. They concentrated on games so much that they took English in the context for granted. This is seen when asked if playing Internet games helped them with English development, they responded that it had very little impact on their English. What appealed more to them when arguing the benefits they gained from playing such games was that games stimulated them to think fast and smart.

Competing with others all over the world through the Internet games, I don't think it had any impact on my language development. I just knew some more slangs or jargons commonly used. Playing games is useful in terms of enabling me to think critically (June 30, 2002).

On the other hand, though his primary aim in playing games was to have fun spending hours attempting to defeat his rivals, Kang discovered another advantage from the playing i.e. making friends and communicating with them in English.

I like Internet games. I made friends with competitors from many countries like England, Australia etc. after games ended . There I could use English to communicate with them. Communication there was not difficult, simple and short messages I used to chat with them (July 1, 2002).

It is not exaggerated to say that the messages that the participants conveyed manifested interesting ideas in relation to language learning environment and nature of tasks. Within the Internet platform, the participants could enter and start playing games at their own convenience with no face-to-face confrontation with opponents. They felt secure in their safe zone behind the monitor and ready to make use of their resources including their higher thinking process in order to put everything under control and then

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achieve their goal. In addition, they had freedom to explore tasks and specify their own strategies to carry out the tasks with self-engagement. It may be necessary, thus, for instructional designers of English to think about establishing learning environment and designing tasks that would challenge learners' thinking while they feel relaxed and enthusiastic to get those tasks done efficiently.

<u>Discussion on Web board</u>

All the participants had experience with Thai discussion board. The main purpose was to search for information through the question-answer format. They said they liked it because it was convenient to scan through messages of those who posted questions similar to their own. Their favorite website was http://www.thai.net/pcmclub/main.html where they could get information about the medical school they planned to enter. Most of the participants would take a role of the information consumers rather than the active participants to post to the Web board. Only Po took a more active role in his online community, Wa Kor Web board at www.pantip.com, a discussion group with foci on current news, science and technologies, human intellectuals, mysteries, in which Thai language was the means for communication. Po found it a community where people from different walks of life could voice their concerns or opinions on topics that were hot at the moment such as politics, science, technology, automobile, education etc. His assertion was supported by his email below.

It's about 2 am now. I couldn't sleep because of the news today. If you haven't known, there're some riots in HadYai (a province in the South of Thailand) *when there are conferences between Malaysia and Thailand about the gas line. The consequence is bloody scene. No one knows who started first, police commandos or rioters. I don't understand why there is no peaceful way to stop this problem. So, I thought I would read some ideas in Pantip.com and go to sleep (December 23, 2002).*

At Wa Kor Web board, he learned from both observation and participation in the group that anyone could say anything they thought sounded right and convincing. Po realized that different people looked at things from different points of views and they had their own purposes of so saying. Such differences stimulated him to think carefully and seriously, triangulating information from different sources of media. Undoubtedly, Po found it essential to be critical when reading those messages so that he could see things in a wide angle, position himself appropriately and contribute his ideas to others responsibly.

The Web board activities that the participants were engaged could be classified into two types: one for general facts and the other for discussions. Most of them were interested in the former type of Web board while Po was interested in both. It could be observed that Po, despite being the youngest among all, felt engaged with his Webboard community. This might have led him to become more matured than the others in terms of his thought processing and information evaluation. After exposing himself to the environment of the discussion group, he learned that it was necessary for him to be critical in order to keep himself in balance, not influenced by any party. He developed his own position based on his judgment.

The data suggests that the Web board played its significant roles for the participants. They identified themselves as ones with the same needs and interests with other Web board members. It became their virtual community where they could obtain and disseminate information upon their willingness.

<u>Web Site Searches</u>

It was found that all participants searched for information from the Internet for their own pleasure. They got some ideas what they should do in order to be able to retrieve information from the Web sites mostly published in Thai. Among the Web surfers, Turk and Po had specific purposes in doing their searches. Turk searched for those articles on sports and Nazi from the Yahoo search engine while Po looked for scientific information about cancer and research on it. Po surfed cancer local and international Web pages to get acquainted with what the type of cancer that his father had was and how it could be treated. The reason underlying this curiosity of Po was his father's illness. Feeling frustrated with young doctors' manner and conversation with his father who might appear, to those who did not know his physical conditions, as severely sick, despite the fact that he could live a normal life, Po became energetic to search for information on his father's cancer through the Internet instead of listening to doctors' opinions only. He believed that the Internet contained the most recent data and research which may help him understand the cancer, its development and its treatment as much as possible. Clearly, the WWW for the participants was the rich source of information where they could engage themselves in Internet activities on the basis of their personal preferences.

Upon the question what the participants felt towards the computer and the Internet, all of them said they liked technologies for many reasons. They thought the computer and the Internet were important because they could get access to a variety of information such as entertainment, and knowledge of different disciplines. They could enter online communities of their interest to observe what people thought about current

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issues.   Last but not least, the participants contended that they had freedom to think and voice their opinions to the public without feeling anxious or encountering those who might oppose with them. The freedom also embraced liberation from limitations of time and place since they could enter the cyberspace to any network of their preferences any time and any place. Like the others, Po said,"*It* (the Internet) *'s important for my living (my student life and career life)(June, 2002).*"

It is remarkable that the medium used in performing these online activities for more than half of participants was mostly Thai except for Po and Turk, who had some experience in searching for information of their interest: "Cancer" and "Body Building", respectively from English Web pages in addition to Thai ones.

4.4.2 Participants' Opinions on Internet Use

This section describes the participants' opinions on two categories: advantages of the Internet and its problems.

Advantages of Internet

The following is the table which shows the participants' reasons for their interest in the Internet use.

Categories	Ken	Kang	Po	Turk	Ek
Freedom to think	√		√	√	-
Development of English	-	-	-	√	-
No Limitations of Time and Place	√	√	-	√	√
Sources of Interesting Information	√	√	√	√	-
Media for Communication and Learning from others	-	√	√	√	√

Table 4.2: Participants' Perceptions of Benefits from the Internet

According Table 4.3, almost all of the participants found the Internet useful for

three major reasons. First, it contained great sources of interesting information and could

be the media for them to communicate and learn from others. The Internet also allowed

them to do activities of their choices at their own time and place. Most of the participants

stated that they enjoyed freedom to think when accessing Web sites or discussion boards.

However, the examination on what the participants thought about the Internet in terms of

its being an aid to develop their English in authentic contexts revealed that only one participant said that he could develop his English through his Internet activities to some extent.

Among all the participants, Ken appeared to be slightly different. In response to the question of how Ken felt about the Internet, he said it was likely to be a powerful device for his autonomous learning. Despite his little exposure to it and his lack of a computer at home, he witnessed from surfing some Web pages from school for a couple of times that "…*with English and the Internet, I can get connections to the world.*" He could get access to rich information whenever he needed and English was the key to determine how much he would be able to acquire the information. He could also communicate with others via email and chatting, the modes of which he tried with friends using Thai as the means for communication.

However, when acknowledged that the Internet would be integrated into English classroom, Ken could not help feeling worried.

It is scary! I had little experience with the computer and the Internet at school. Though I know, to some extent, how to email, chat, or access Webboard or some websites, they were almost all in Thai contexts and not related to any courses before (June 12, 2002).

Ken also stated that being new to the medium used for the study worried him at first. The stern look of the teacher as seen from her picture at the back cover of the course textbook doubled his being nervous for the first two weeks. "*I prayed not to be picked up to respond to your* (the teacher) *questions.*" This shows that students' anxiety

in new learning environment could aggravate with distance between them and the teacher.   The rapport between students and teacher is, thus, essential for establishing relaxing learning atmosphere.

Problems with the Internet

Being asked what the pre-medical students did not like about the Internet, they asserted different sorts of problems. Some replied that they were concerned about virus infection. When accessing the Internet and retrieving information, Turk said there was likelihood that he was risking being infected by virus which might be able to destroy his computer system.   Turk mentioned about hackers as one of the Internet problems, emphasizing that hackers tended to steal or damage information sources. His concern about hackers showed up at the end of his project where his group Web pages were gradually replaced by nude and obscene pictures. This point will be presented in the findings for Research Question 4.

Another concern for many participants, at the first month of a lack of link from their home to the university computer center, was the expense they had to pay approximately 15 baht an hour (an approximate rate of 1$ = 42 baht) to commercial Internet providers. Since the participants used the modem, they could not retrieve information at fast speed, especially, that with pictures or other sophisticated multimedia. As a result, it took them a long time to access a Web page and that cost money for them as well.

For Po, he did not have the speed problem in order to link with the Internet because he kept himself updated with current information on which provider would offer a good deal in terms of services and pay rates. What he found problematic was

credibility of information found on the Internet. For Web sites, he thought it was necessary for him to check who produced them to see if they had authority or expertise in what they disseminated online. Likewise, in reading interest group discussions, anyone could post messages based on their views. Therefore, he needed to check information well enough before reaching any conclusion.

Turk's concerns differed from the others. When asked what he found intimidating on the Internet, he contended that there were many good Web sites for him to learn new things but bad ones could be seen and easily accessed. He gave an example of Porn Web sites. To him, they were dangerous for teenagers. The goals of those sites were to attract viewers' attention who could be anyone no matter what age they were, in order to make money with no ethics and responsibilities for the society.

Summary

This section illustrates the participants' perceptions of the Internet based on their preferences. All loved the Internet but did not use it for English learning development. The findings show that they enjoyed Internet games, online discussion and Web searches for information of their interest. These activities, mostly with Thai as a medium for communication, could intrigue them because they were pleasant, challenging and information-updated. They had some skills in using search engines and some experience in Web board.

What they were concerned when accessing the Internet were virus infection, hackers, expenses in the purchase of online services, and time for information downloading of different modes.

Research Question 2

From the participants' perspectives, which of the context/environment enhances their writing development? What are the conditions that affect the participants' writing development?

In this current study, the pre-medical students were exposed to three Internet environments of Web construction, Triampaet group discussions, WWW searches and readings and Web page construction. To the question if the participants found English learning/writing in the Internet-integrated environment had impacts on them and their writing development, they stated that the Internet environments were new settings where they felt relaxed. The relaxation attributed to their active roles in their learning and writing processes. Their engagement required them to think what they would do and to do according to what they had thought.

All the participants stated that each environment had its own characteristics that collaboratively enhanced their writing development. The following are the participants' perceptions of Web reading, Web construction and the Triampaet online group discussion.

4.5 Participants' Perceptions of Internet Activities

in English Class at University Level

4.5.1 Reading on Web Pages

Acquisition of linguistic elements

In the participants' opinions, the text provided them with authentic use of linguistic elements earlier presented in class (such as expressions of causes, effects, definition, process, comparison or classification). They, thus, were able to apply the knowledge acquired from their individual reading, the result of which enhanced their

comprehension and information retention. As learners became familiar with the way

each message was composed, they could take the text as a model to develop their own

writing. Kang said,

>   *Passages from the Internet contain updated information about biological and
>   medical sciences I'm really interested. When reading texts from the Web, frankly, I read
>   on and on without any attention to language patterns. Yet, sometimes, I could recognize
>   from the text I was reading sentence structures learned in the classroom. To some
>   degree, reading on the Web helps reinforce my reading and writing strength by enabling
>   me to internalize the patterns we study in class. In other words, besides reading the text
>   with ease and better understanding, seeing them over and over in different contexts helps
>   me generalize their uses my own way and experiment employing them in my writing
>   (August 28, 2002).*

<u>Acquisition of contents</u>

The pre-medical students also found the text from MedlinePlus serving their

needs and interests. This is because the content included diseases, anatomy of the organ

in problems, causes of diseases, symptoms as well as treatment. The participants could

integrate what they had learned in high school and university biology classes into new

pieces of information from their reading in the English class to construct new knowledge.

This revealed the interdisciplinary learning where learners could benefit at a

further/higher level and their learning became meaningful, and enjoyable at the same

time.

Turk described how he felt towards his reading in MedlinePlus Web site and

online texts in class:

>   *The first time of reading an online article on health, I didn't like it. Later,
>   however, I felt glad and fortunate to have read what would be beneficial in my further
>   study (August 30, 2002).*

Turk also liked all the online texts presented in class: colonoscopy, coronary

angioplasty bypass grafts, hypertension, migraine headaches, sleep disorder, articles on their topics for the projects from CNN and Time, patients for practice, mistakes confidentiality, breaking bad news, telling truth and withholding information, and smoking. He emphasized their connection to his future career. *"That helps instill a part of basic knowledge of medicine in me (August 30, 2002)."*

Acquisition of new terms from Web sites

From reading texts equipped with multimedia

Previous studies on vocabulary learning indicated significance of learning new terms through extensive reading where learners needed to guess meanings of unknown words from contexts (Hucken & Coady, 1999; Nation, 1999;Yoshi & Flaitz, 2002). Yet, which contexts would enhance language learners to guess meaning correctly and avoid the false verification of correctness of their inferences is an intriguing question. In the current study, most of the participants advocated that from reading a lot of information from different Web sites for the group project, they acquired more vocabulary through Web sites such as e.g. Medlineplus. They asserted that reading the interactive tutorial text removed the threat of insufficient vocabulary, a problem of incomprehension of English texts, because the text was accompanied with visual aids. For example, pictures, and animations explained what was going on in a particular slide clearly. They contended that they could pick up vocabulary quite well, especially key words. This study supports Paivo's (1990) dual-coding theory which states that effective vocabulary learning takes place when learners gain access to messages verbally, through texts and visually, through pictures.

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Turk recalled his acquisition of new vocabulary when reading coronary angioplasty bypass graft. He contended:

> *Vocabulary is something I struggle with. I know once I get stuck with difficult words, I couldn't read on. I need to reread that difficult part again and again until I understand it or I'll note down those words in a list and look up their meaning later. I like reading texts accompanied with pictures or animations. They help me guess the meaning of unfamiliar words with ease and I think I can recall them for my writing more easily than words that I look up their meaning from a dictionary (July, 2002).*

It is logical to assume that texts constructed on the Internet with multi media comprehension enhancers impacted the participants' vocabulary acquisition. One participant stated that he felt thrilled with the description of a blood reroute from the heart to the heart-lung bypass machine in the process of a coronary artery bypass graft. Examining the description, an appositive was employed to define the terms 'the heart-lung bypass machine, a special machine that pumps blood through the body and loads it with oxygen'. The picture of the body with the machine linked to the blood vessels while the heart was being worked on and blood was flowing through the new route told him what was going on vividly. The participants tended to associate the description with what they saw and constructed meaning of difficult terms, and later of the overall text. Thus, he could imprint what he understood in his memory from both textual as well as visual glosses. This result supported Nagata's (1999) finding in the study on the computerized version of effectiveness of glosses on learners' vocabulary acquisition. The current study further found that the participant applied his newly acquired terms found from his online reading as well as ways to introduce terms he found might be unfamiliar to his readers, to his writing.

From Reading Specific Topics

Through searching for information for their group Web sites, most participants also found it help enrich general and technical terms used in texts under the topic of their interest. As they were collecting information, they got acquainted with it. They found that they automatically acquired difficult and unfamiliar words and understood more about their topics.

Kang said he got an idea of approaching online texts from another group. Their advice helped him select and collect data for his group project. He reported that the group was in the stage of searching for information from websites from reliable information sources such as WHO, and Aids organizations. According to Kang, Rian and his friends didn't use Thai information because of difficult Thai technical terms that they had to translate into English. This differs from English texts which, despite difficult technical vocabulary, could be better understood because there would be ways for them to know what those terms meant. The ways included using context clues, and searching other Web sites. For example, if the group came across one difficult English word found in one Web site, they might search its glossary. Or if the Web site didn't have the glossary and they really needed to understand the key concept, they would go to another Web site which contained the same information but with enough details for them to establish their understanding of the word and the concept. The process as described by the group inspired Kang to use the strategies and found them working for him as well.

…I've acquired new terms with ease from the texts with pictures, and animations. …I learn more and use more technical terms. I notice that my vocabulary repertoire greatly increases. Now, when I get back to read texts I found difficult while studying in high school, I understood them well. What I notice is that it is not just the increase of general terms but also terms in scientific or medical areas (August, 28, 2002).

The participants' expertise in their project assisted the class understanding of some technical terms necessary for group discussion. From my observation in one class, Po, working on cancer, defined the term 'metastasis' to the class when all the learners read a plain online text about a patient who suffered the final stage of abdominal cancer. They did not know this term, a key word which would lead the learners to make decisions on telling the patient the truths. Based on extensive online text reading, Po then took a role of an expert of the area of cancer by explaining what it was to the whole class and gained admiration from their peers for his contributions.

It is not exaggerated to state at this point that the participants gained vocabulary with extensive reading of online texts of a specific topic of their choice. The more they read, the more they became familiar with new vocabulary they encountered the very first time. They were able to internalize those terms and understand them when encountering them in passages and use them in their writing.

Learning from different Web sites

Most participants contended that a number of Web sites on the topic of their interest made them feel less anxious when researching a topic for their group projects.

They had options to consume information in case the Web site they were working on explained any part inarticulately. They stated that among those Web sites they selected for their homepage construction, many carried some information inaccessible for them. Some of difficulties they encountered were language barriers and in-depth information in Web sites for experts. To solve the problems, they searched for the issue

in question from different Web sites which were more accessible and informative.

Similar to the other participants, Kang described his information search and data

collection for his group homepage.

It is really challenging to work on stem cells. …My friends and I knew very little about them and felt so curious that we decided to research the issue. We found many interesting Web sites about stem cells. With them also came problems, especially from the start of our Web searches. We were anxious and wondered if we needed to change the topic. We struggled to understand what they were all about, including technical terms and general vocabulary used to describe stem cells. The struggle period lasted a long while until our intensive searches. The more we read, the more we became clear about them. We gradually, I guess, were familiar with the cells and their stories. I got lots of vocabulary as it was cyclically used in various Web pages (September 9, 2002).

Kang said he and his group used Google to search for data on stem cells. After

putting the key words in the search slot, the result looked as the following.
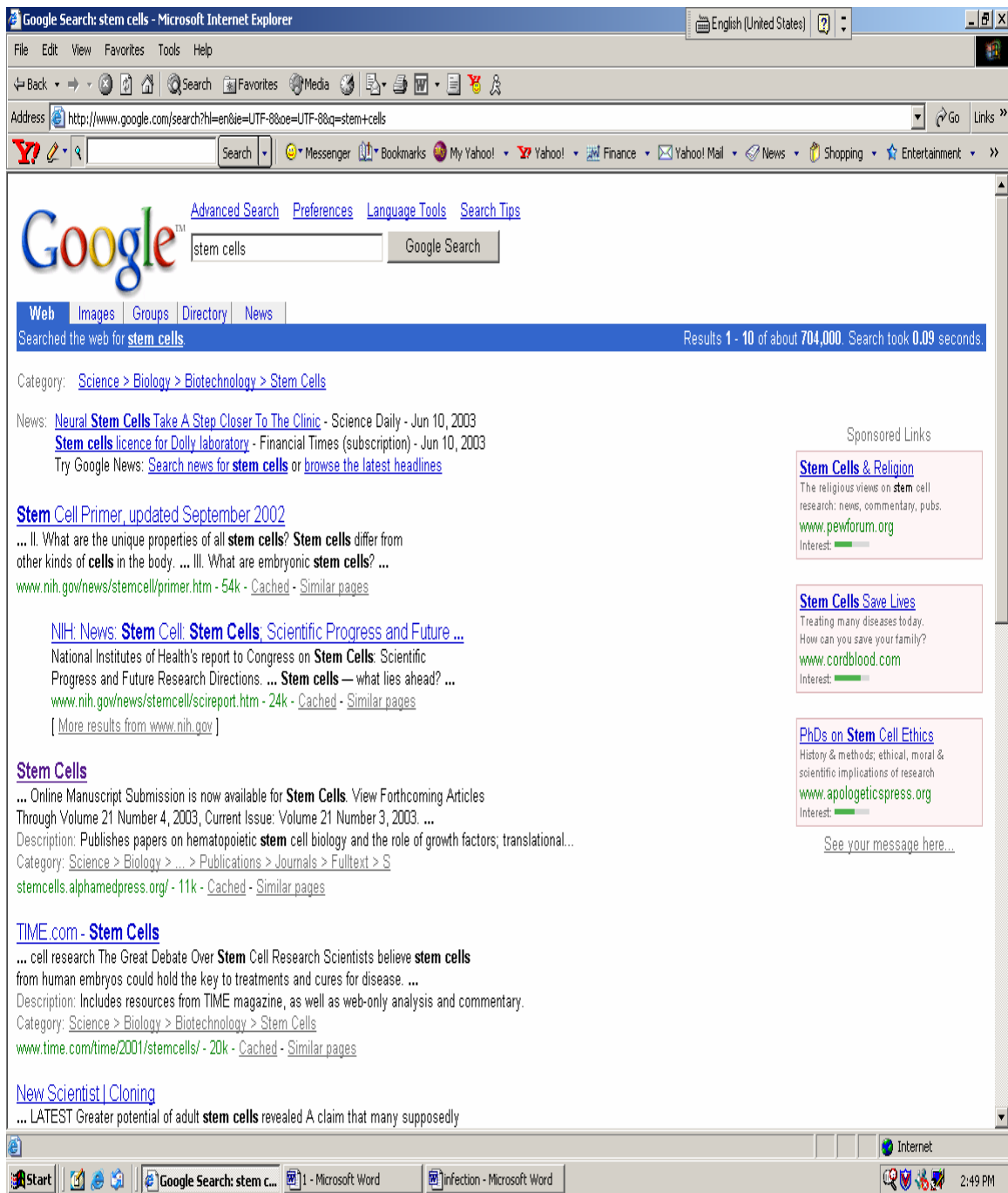
Figure 4.5" :Learners accessibility to WWW information sources

From Figure 4.5, it can be seen that the participant could reduce his concerns about text incomprehensibility in the Internet environment. After being able to cope with how to search and select WWW information sources, he could access information sources, consume data required, and also check his understandings comfortably and conveniently. This learning process differed from the way he used to i.e. from a course textbook in which once he encountered some difficulties, he suddenly got stuck and tried to solve the problem of incomprehensibility through language per se e.g. looking up meaning of difficult words or trying to translate the part of the text unclear to them from English into Thai. In this case, the participant invented his new strategy of learning new knowledge through extensive reading in collaboration with searching for word definition and English-Thai translation.

Despite the benefit the participant gained from Web sites, there are caveats as well. Researchers found the WWW a source of information which could provide to its Internet surfers both ill and healthy information and thus, surfers needed to be conscious of the nature of the WWW and to be evaluative (Slaouti, 2002; Spiro et al., 1995; Bloch, in print). Interviews with the participants revealed their consciousness of the issue. Some participants also expressed their concerns about the reliability of Web sites in terms of its content and legitimate authorization. Po stated,

The Internet is the site where a number of people from different parts of the world can publish anything online (and accessible by the public, the Internet users). Some who publish on their homepages may be knowledgeable but others may not be eligible to do so. It is, therefore, necessary for information consumers to be smart and capable enough to screen for reliable and accurate information and sources of information (June 17, 2002).

Po and Turk, taking this into considerations, surfed Web sites which they were constructed by authorities with expertise. They rationalized that at least information they gathered came from reliable and widely accepted sources.

Use of online-dictionaries

In order to read authentic texts online with understanding, the participants stated that they needed to use dictionaries to check some terms they did not know or they were not sure of their meaning. Some participants found online dictionaries useful because they could read the text of their choice while having the dictionary Web site such as www.m-w.com on and accessible any time.   For Po, in tackling with very technical vocabulary, Po used online dictionaries linked from the course homepage, among which On-line Medical Dictionary (CancerWEB) was his favorite. In an interview, Po asserted how important the online-dictionary meant to him.

The Cancer online dictionary is very informative. The entry presented on the Web site is defined in an easy-to-understand way and with sufficient information. I like it very much. One time, we wanted to search for information on cancer at the gall bladder. We misinterpreted its meaning and all we worked on was cancer at the urinary bladder instead. After studying it for a while and checking their meanings from the dictionary, we realized we were off-track. Well, yes, it took me a lot of time to correct this part. I learned a lot along the way of revision (September 28, 2002).

Ek used online-dictionaries as well; yet, they were not his favorite. He preferred using his English-Thai talking dictionary. The participant reiterated that it took him time and energy to understand the definition of a term given in English. He said it was because he often discovered that the definition contained some unfamiliar words so he could not be clear with the meaning. In one computer laboratory session, I noticed his searches for words while reading a case for discussions.

It should be noticed that online-dictionaries might work well for the participants whose English proficiency was high enough. As in Po's case, he could solve his problem of collecting incorrect data of cancer at a particular part of the body through searching from the online dictionary for the meaning of the terms he got confused. However, for one with a limited vocabulary repertoire, the online-dictionary may have been too discouraging to use.

4.5.2 Homepage Construction

One assignment the participants were required to do was to construct a Web page on a topic of their interest. They could choose their group members who shared the same interest and with whom they felt they could work. At first, they did not welcome this type of assignment, finding it too demanding since they needed to spend much time and energy in learning how to build a Web site, to research and to write a lot in order to carry out this project. However, with assurance that they would receive technical and linguistic assistance upon request and with flexibility in working on their own interesting topic at their own time, they agreed to implement the assignment of constructing their Web sites.

The following are the findings which show the participants' perceptions of their homepage construction. Most said the activity enhanced them to learn from what they liked and provoked their critical and evaluative minds throughout the construction processes. This is because they had passions for the topic they were working.   They could engage themselves in the projects.

<u>Writing out of passion</u>

Illness of a family member

 Po had strong determination to work on cancer so that he would learn more

about it. The decision was based on the fact that his father had cancer. In his

autobiography, Po wrote,

My father had a tumor which was suspected to be a cancer in the intestine system
called Leio Myo Sarcoma. But luckily, the sergeon successfully operated it and saved my
father's life. …A year later, it was found that the cancer scattered to the liver of my
father, but he could mostly controlled its size by the alternative therapy together with the
normal one.

His father's sickness not only played a major part in his entering the medical

program but also led him to relate his personal interest with his Web construction project.

His familiarity with the topic, with human subject sources, his father as well as his

doctors, made it easy for him to convince his group to work on cancer. The project, thus,

emerged from Po's concerns about his father and enthusiasm to understand more about

his conditions and treatment, his interest in the disease, and his desire to develop his

English writing through the topic that could serve his needs, which also was meaningful

to the other project members. This transformed learning into personalized experience

(Woodlief, 1997).

Preventive Measures VS Treatment

Ken and his friends researched on Yoga. In interviews, Ken reiterated that

medical science should broaden its own boundary. In his words,

I think modern medical field narrows itself to treatment, research on causes of
diseases, new drugs and their effects on the patient. We've witnessed drug resistance and
heard of new experiments in search of new drugs that would be able to remove new
strains of those pathetic micro-organisms. Modern medicine has gone too far towards

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treatment directions. I think we'd better weigh the balance by contemplating seriously preventative measures with focus on well-living---the development of mind, body and spirit. Yoga is, then, our choice for the Web construction project (July, 2002).

Our body

For Turk, body building interested him for almost a year and he trained himself by toning and building his muscles for a few months before the semester started. As a beginner, he felt an urge to know more about it. His group members became enthusiastic to search for information from the World Wide Web and shared what they found with one another before Web construction. According to Turk,

Body building is a passionate topic for us. My friend, Tee, who didn't have any training, told me that reading these texts made him feel excited. Despite his little background on the body building, the more he read, the more he enjoyed. He also said that he learned some "unexpected" ways of how body-builders did in order to build their bodies, for example, injections of some hormones or intake protein tablets to enlarge their muscles (August 16, 2002).

Stem cells: Promising treatment

Kang and Ek did the same project on stem cells. They chose this topic due to its being hot and seemingly promising in medicine at the moment. Kang contended,

Our group members haven't heard of stem cells before. It sounds miraculous for us to know another possibility of using stem cells as an alternative of new treatment that might offer patients with unhealthy or damaged organs with new strong body parts (June 22, 2002).

To conclude, the participants engaged themselves to the homepage group project. They could work on what they needed to know. This motivated them to do information searches, selection of and report on what they found intriguing to them and that might catch their audience's interests.

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<u>Outlining and designing Web pages</u>

To carry out the Web construction, the participants contended that they needed to make many decisions. They did brainstorming about goals of their Webs, relevant data to search from the Web, their organization and the format of presentation. An example of the participants' group discussion on their projects was recorded on August 9, 2002 after they had done with their searches on Yoga on the Internet.

Ken   *I want to see our Web pages different from other existing ones we've seen so far. Something unique, not a home page with postures only. Something like research with scientific evidence or information on the part of the people who practiced Yoga.*

Tao   *Actually, it was a good idea but it seems difficult to get scientific proof or research on how Yoga works on the body. The world just became enthusiastic about the alternative.*
            (Bright, another group member listened attentively.)

Golf   *Anyone knows where we could access research data?*

Bright   *Let's check our online library again. I think I saw one interesting link that might lead to the source.*
            (Golf went to the computer and started searches. The other members surrounded him, all looking at the monitor.)

Bright   *Try click Database supported by Ministry of University Affairs.*
            Yeah, then, click there. Research abstracts.
            (Golf typed "Yoga Research" in the search slot. It hit one abstract. All members looked happy. Golf printed the page.)

Ken   *Golf, try just "Yoga". Let's see if there'll be more findings.*
            (A lot of abstracts showed up. They scanned some of them and felt satisfied with research on Yoga practitioners and their health conditions.)

Tao   *So far, we could include in our homepage general information on Yoga, postures, this, research we've just found.*

Ken   *I think there are more that we can include in our homepage. Lots of good information about Yoga.*

Golf   *What about providing readers with interesting links for them to research in case they want to.*

Bright   *I agree with Golf.*

Tao   *I've an idea of introducing a person who teaches Yoga. This might be interesting.*

Golf   *Right, but I don't know any Yoga teachers.*

Tao   *I read from pamphlets and found two interesting Yoga places. I got the telephone numbers.*

Tao   *I'll take care of the contacts. I'll ask for an appointment. If possible, we could interview either of them.*

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The data aforementioned indicates the group's attempts to co-construct a piece of writing that would meet group members' needs and interests through negotiation and collaboration. In the process of data collection, they gathered to make decisions of their work. Through discussions, they came up with the outline of their project. Like Ken's group, the other groups drew outlines in a tree-diagram or flow chart generating relationship of each topic and its subcategories.

The data suggested that the Web construction influenced the participants to pay greater attention to the quality of their writing for their readers, not solely for the teacher as in the past. Since the reader was not the one who would correct their writing but the one who would consume information, they felt responsible to convey messages with care. That explained why writing, reading, rereading and revising became a part of their work. In addition, they moved a step further by group members else to read and give them feedback for improvement. It is axiomatic that they realized that comments from the group members would enable them to create a good piece of discussions on their work and to see their writing problems, which might be vocabulary or structures. This process, thus, made them feel active to learn from one another for their individual as well as their group benefits.

However, some participants could not have their writings reread and revised. Due to time constraints which might have occurred from some difficulties such as the familiarity with the software for homepage construction, uploading data, or time management, they could not have their group members help editing. Under such circumstances, they missed feedback from others and their writing seen on the Web sites still needed being cleaned up.

4.5.3 Triampaet Online Discussion Group

The Triampaet online discussion group was the writing forum that most participants found relaxing to interact with their peers in English writing. The following is an example of a page that displays messages the group members submitted together with details such as Yahoo ID, date and size of each message. The pre-medical students could select to read specific messages by clicking at their subjects.
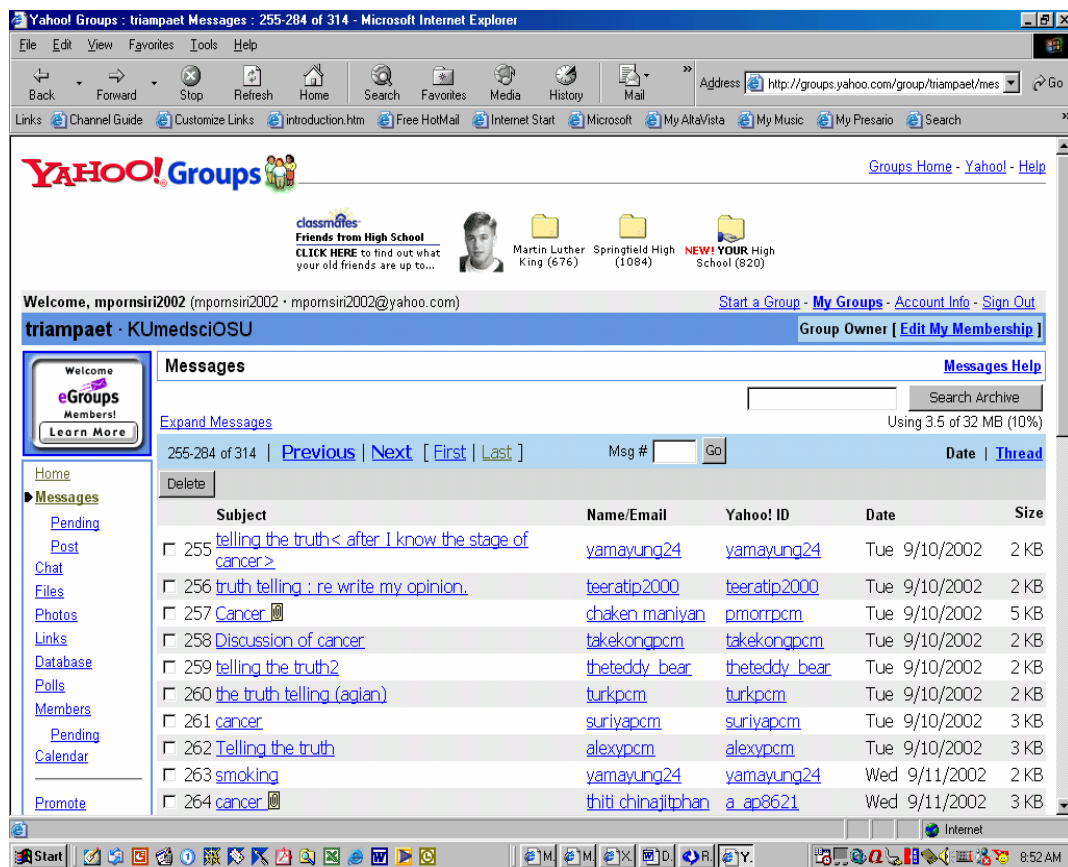
Figure 4.6: List of messages to Triampaet group

They might glance through all the messages of this page by clicking at "Expand Messages". Below is an example of messages after being expanded. They could be read conveniently.
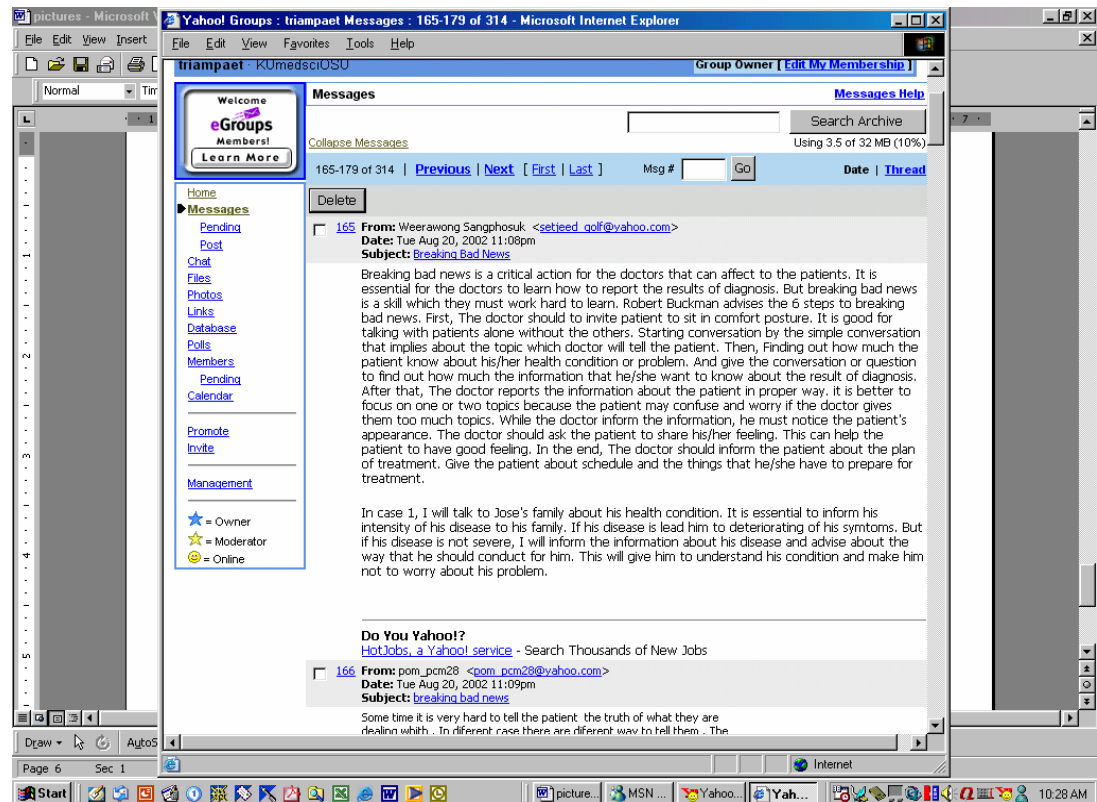
Figure 4.7: Expanded Messages in Triampaet Group

The features of the Triampaet group together with flexibility for the participants to work at their pace and convenience derived the following themes: the comfort zone, reduction of anxiety, and empowerment.

4.5.3.1 Comfort Zone

The participants considered the Triampaet group a comfort zone and empowerment source for their writing development. They asserted that Triampaet discussion group made them feel comfortable to communicate in English with their peers. This finding corresponded with other research (Belcher, 1999; Beach & Lundell, 1998). Below are the recurring themes that characterized the Triampaet online discussion group and its impact on the participants' English writing.

From the interview and observation notes, the participants stated that activities in the Triampaet group enhanced their abilities to communicate in English better than before. They could use English to serve different purposes such as exchanging information, expressing opinions, making arguments, and convincing peers. Also they learned from their friends' writings, and studied those messages as examples to write their own.

Relief from peer pressure and time pressure in communicating process

Communicating with friends in English through the monitor enabled the participants to express themselves well without peer or time pressure, when compared to talking to the class. Ken argued that encountering his peers was stressful. This is because he had to speak in English, the skill he least had. He would likely take lots of class time for talking to the class. There was likelihood that he would make lots of pauses, and mistakes in his messages as well as in pronunciation, which, in turn,

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prohibited his flow of thoughts, or might become his friends' joke. To him, once he

made mistakes in speaking, he could not change or correct his messages before projecting

them to his audience. While speech communication was a prompt activity, he found

himself capable of taking control over written communication. Ken stated that in

Triampaet group, he had time to contemplate the message and the way to convey it

powerfully. Ken said he could compose his messages with pictures retrieved from the

Internet to arouse the list members' interest in jumping into discussions on the topic in

which Ken was interested.   It became easy to make contributions to other project groups

by recommending interesting Web sites for their projects. In short, he felt more

comfortable with writing.

Change of negative to positive attitudes of English writing

Writing to the group online could change some participants' negative to positive

attitudes toward English writing. They could communicate with friends, focusing on

messages rather than grammatical rules. They stated that they were free to write about

the topic in relation to their background knowledge, experience and opinions. That

enabled them to write a long text.   In Ken's words,

I think that discussions on Triampaet group made me change my attitudes
towards English writing. In such informal context, I did not restrict myself to meet the
teacher's expectations because I was writing to my friends. I felt relaxed. I did not have
to be accurate with grammatical rules and, thus, I could write more than before. I was
happy to write English texts and this good feeling also influenced my formal writing. I
started enjoying writing English composition in a formal context too. My previously
being tense and nervous was transformed into joyfulness to write (November 21, 2002).

The finding of the current study that participants did not pay so much attention to

linguistic elements when writing was similar to previous studies (Braine, 2001;

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Gonzalez-Bueno, 1998). However, what made this study unique was that instead of

participants' grammatical mistakes increasingly seen at the semester end, the participants

in this study could write with fewer mistakes and more complex sentence patterns.

Cozy environment among friends

For some participants who had no confidence in their English writing

competence, the environment where they were among friends encouraged them to

become confident communicators in the group.   In Ek's words,

It (Communicating with friends in the Triampaet discussion group) lessened my
fear of English. …Before participating in the Triampaet group, I felt embarrassed with
my English writing. It was not good enough to be posted for anyone to read (August, 28,
2002).

Observation of their peers' messages made the participants feel relieved and want

to write.   They could position themselves equally among others. The following was one

student's statements.

 After observing some messages posted earlier, I noticed that my friends also
made some grammatical mistakes but I could understand what they meant. I then
realized that I could learn from my own and my friends' mistakes. In turn, other friends
might find mistakes unintentionally made in my messages useful for them to learn. I
guess I gain confidence when exchanging messages with other Triampaet group members
(September 2, 2002).

The participants became confident in writing and communicating in English with

peers. Unlike traditional writing assignments that were between learners and the teacher,

Triampaet Group became a forum where they could submit their messages to a wider

audience i.e. the teacher and their peers and learners could respond to their peers. Since

they could write and revise their messages as many times as they liked, they could, if they

would, write a good final draft and felt happy to share their work with others. As a

course of time passed by, learners could develop the way they wrote by learning from their peers' writings in addition to language foci learned in class and authentic texts online. They, then, tried to experiment new elements in their writing.

The Triampaet discussion group was not always pleasant, though. One participant did not want to post his message to the group due to a difficulty in connecting the university server from home through a modem. That led him to a need for the teacher's paper-based feedback for his writing. In an interview, he revealed:

I prefer submitting assignments in the pen-to-paper format to emailing. First, it is more convenient for you (the teacher) *to correct them. Second, I feel lazy to switch on the computer and get access to the Internet. Sometimes connecting my computer with the university server takes time. I need to dial the number over and over again (August, 28, 2002).*

To sum, the Triampaet group created an environment where the participants could reduce their anxiety in using English to communicate with their friends. It boosted their confidence as communicators of English. They looked at mistakes as a stepping-stone for writing development. Yet, problems in accessing the Internet from home might lower the participants' interest to interact with peers online.

Arena for reticent but skillful writers

For the participants who were reticent in classroom interactions, the finding of the current study revealed that they reacted on the Triampaet group differently. Po, who was reticent in class, became enthusiastic in interacting online. Unlike speaking, writing was his favorite activity. He was confident in his writing skills, especially when he could budget his own time to write, and revise before sending his message to Triampaet. He contended that he had almost no problem with writing. This participant showed his high

English proficiency and his ability to write English composition. He wrote long texts. The findings confirmed Belcher's (1999) that the asynchronous mode was a setting where reticent students could voice their thoughts in their L2 writing.

From his peers' point of view, this participant could select words to express his ideas well and structural patterns used were of the advanced level. An illustration could be seen from a part of his post to Triampaet on Cloned Embryo used for Therapy dated June 13, 2002.

I'm interested in the point about 'Cloned Embryos used for Therapy'. It informs that the therapy can make present treatment more effective. The only bad effects are that it is hard to define whether (it) is a medical problem and whether it is wrong to kill an embryo. I don't totally agree or disagree with this therapy. I have an opinion that we should take priority to the man alive to the unborn one (an embryo that isn't covered by the law). It is very delicate to explain this. I don't mean that scientists have absolute right to kill (or murder) a cloned embryo. I mean if they do this to save human's life, it was (is) not wrong. Imagine that a patient has a malfunction in (the) nervous system (such as Parkinson's disease) and surgeons try to implant brain cells from embryos that haven't yet been human. …

Despite the fact that the Triampaet group was a comfort zone, it would be overgeneralized to take it true for everyone at the same stage of readiness. For one whose English was not as good as others, writing to the discussion group was humiliating, especially at the start of discussions online. From my observation fieldnotes, I noticed that he submitted his discussion messages to the teacher directly, instead of posting them to the discussion group. When I asked him about this, he briefly said:

My friends' English is much better than mine, which is full of mistakes (June 26, 2002)

The cases of Po and Ek, both reticent in class, reacted differently in the Triampaet group. They suggest 'the digital divide', not the social issue of inclusion/exclusion of those with and without access to technologies as discussed by Warschauer (2002). In this

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classroom context, while the Triampaet group setting could empower silent students who helped English writing competence to express and expose themselves to the public and earned praises from peers, it could impact those reticent students with low English proficiency and with little confidence since comparison made by peers or self-evaluation was inevitable.

4.5.3.2 Reduction of Anxiety

<u>Communication with real audience</u>

All participants stated that they felt less anxious when entering the Triampaet group. They did not have to worry about teacher's expectations and her strict regulations, grammatical mistakes or grading. Their posts to the group would not be graded on the basis of grammar or mistakes but they would be rewarded ten points for seven posts minimum. In addition, the participants understood that the purpose of subscribing to Triampaet group was to form an English community with their peers in order to exchange opinions, request for and render information or assistance to community members, real audience who did not have the authority to look for errors in their messages for grading. Turk talked about his engagement in the Triampaet group and his relationship with the group members:

> *If you notice, my greeting from the start till now has changed from Hello to Hi, from Hi to Hi guys, then What's up and then, Zuppp Man. I became natural. English itself is like an instrument for me to communicate with my friends, who, although we studied together everyday, became closer in Triampaet Group (September 18, 2002).*

This comfort zone also soothed Ken's discomfort of writing English texts. Even though Ken felt nervous at the start since everyone in the group was new to one another. With familiarity through personal contacts and their posts to the listserv, Ken positioned

himself as an active community member shortly afterwards. His previous being tense

and nervous was transformed into joyfulness to write in this new environment. He sent

altogether over 30 messages throughout the semester.

> *I felt very excited to send an email to our group so that everyone could read with a click on their mailbox. …I enjoyed discussions. I felt less afraid of English. …Discussing in the listserv was like I was talking to my friends about an issue which might not have been raised for discussion elsewhere. The differences between talking face-to-face with them and writing online were that we talked through the written text and that our communication was in English (September 2, 2002).*

The fact that Ken felt happy to write to his peers and voiced his opinions to them

and listened to theirs on the listserv considerably lessened his anxiety in learning and

using English. Instead, it heightened his motivation to communicate through developing

his English writing.

Risk-taking

When asked if the comfort zone affected the participants' writing, three referred

to risk-taking which resulted from two factors: a lack of grading pressure and peers'

grammatical mistakes in their messages. The students contended that the Triampaet

community was an informal setting. Relaxed as they felt, they had no pressure in writing

for teacher's grading. So many of them wrote in the informal style, not very strict with

grammatical features as in writing in the formal setting. For this reason, the participants

expressed their trains of thoughts with new linguistic elements, taking risks of making

mistakes in order to learn from them. In Turk's words,

> *I try to use new terms and new structures seen from different sources such as those in friends' messages, or in online texts. It is like an experiment for me to try new things in my messages (August 30, 2002).*

Ek was another participant who learned from trials and errors when writing his message to the Triampaet group. He stated that he liked to write with the structures that he felt confused with their uses. An example he cited was 'more than'. He was not sure if he could use them properly. So he used 'more than' in his writings. Finally he could employ the pattern correctly after seeing 'more than' used many times in online authentic texts.

For writings with mistakes, instead of having negative influence on others, two participants lowered their peers' anxiety. In Thai culture, especially in classroom, losing face is a big issue. Mistakes are regarded inappropriate and indicated one's deficiency/inferiority. Since writing to Triampaet Group at the beginning of the semester was writing to the whole class including its instructor, who were total strangers, and who could read their messages, it was unavoidable that the nature of this type of writing, making mistakes, and unfamiliarity with peers inevitably heightened learners' anxiety. However, after a while, they became familiar with the nature of writing to a greater number of audience. After observing their peers' messages, they realized that their peers wrote with some mistakes. They, then, let go the degree of the feeling of losing face and became more willing to take risks in communicating with others without feeling overwhelmed by mistakes they might have made. Learners gradually accepted that making mistakes was a part of learning process.

4.5.3.3 Empowerment

All of the participants found that they became empowered in their Internet learning management. As discussed in Research Question 1, in schools, the participants had to follow the teacher, all her instructions and one textbook in the classroom

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environment and that made them feel their learning process stereotyped and loaded with activities not so much related to them and their interests.   They were limited within the boundaries set by authorities and the classroom. In the English course with Internet activities, on the other hand, the participants gained freedom and power to choose what to learn and apply what they learned in authentic tasks with the support of great access to sources of knowledge worldwide. In the next section, empowerment will be addressed in the aspects of learner-centeredness, learning from peers, writing with different roles, opinions and information exchange, impacts of peers on writing, awareness of communication process and its difficulties, cognizance of audience, critical thinking, and enthusiasm to communicate.

Learner-centeredness

In the Internet environment, the participants asserted that they could transgress and push their boundaries from being full-time novices to becoming more independent. In the process of learning, many participants gave an interesting remark on how they could learn/write effectively. They could pinpoint their strengths and weaknesses, for example, which linguistic elements they had acquired and which they had not. As earlier mentioned, Ek found 'more…than' pattern problematic. He, then, observed its uses in different contexts he found in his friends' messages as well as online texts. Finally, he could use this pattern appropriately.

To the students, effective learning did not completely come from the teacher or all of her correct answers to questions. They wanted to acquire knowledge through their direct experience involving their thinking processes, which would lead to understanding and long-term memory. From earlier accounts of Ken and Po, obviously, they were

critical with their learning with out-of-date materials. Their comments may have implied

that they could make a decision of how they could have their needs fulfilled if they would

be allowed some space to exercise their power. At this stage, the participants showed

their enthusiasm in sharing a part in taking charge of their own learning. Turk confirmed

Ken's and Po's arguments through his activities on the Internet.

Turk: *I like them* (course Web site and Triampaet group)*. I love surfing the
course Web site and make use of helpful sources of information, e.g. prefix-suffix,
readings from CNN, and visiting other interesting links. For online discussions, I
visit the Triampaet group every time I access the Internet. It is so surprising for
me to see that there are so many messages posted to Triampaet each week. Last
time it was over 30 messages!*
I   *Have you read them all?*
Turk   *I do selective reading, the ones of my interest. I learned something from
my friends' messages. Reading them gave me ideas of what to write,
taking those posts as models and then, originating my ideas. I could focus
on what to write in response to their argument (July 8, 2002).*

Through Turk, it is clearly seen that he acted as an active learner. Positioned

himself at the center, he evaluated his own English ability and then, specified what

language elements he needed to obtain and how he could do in order to achieve the goal.

So he spent his time in activities he found useful and interesting. Among many Web

pages, he selected to visit the one of affixation that helped him with word coinage with

the aim to expand his vocabulary repertoire, and those pages for his reading practices.

In the Triampaet discussion group, Turk also evaluated his peers ' messages for his

writing models, and discussions. To Turk, the group triggered his thoughts and that

helped him generate his ideas in writing.

Impacts of peers on writing

Another factor which made the Internet environment a comfort zone, relief from

anxiety, was the opportunity in which the participants developed their writing from their

peers. It was unanimous that the participants of all proficiency levels in this study, in

interactions among themselves or the other learners, obtained new terms or structures

they had not used before and tried them in their messages posted to the Triampaet group.

A voice from a low English proficiency participant reflected one way of his writing

development as follows.

I am not very good at English. Writing was one of my biggest problems. Many times I feel I want to say this but I have no ideas how to express it. Reading some of my friends' posts, I could learn how they did that. There I could learn to develop my own writing (July 8, 2002).

Discussions on the Triampaet group were advantageous to writing development.

The students could compare their own work with peers and decide whose messages

would be their writing models. They considered uses of English structures and

vocabulary as criteria for judging which represented good writing models. For example,

Kang referred to a couple of his peers whose English texts contained much little influence

of the Thai language on their English writings. Ken mentioned Golf's good text

organization which could walk readers to his points. Po asserted that he learned new

ways of expressing the same ideas he had in different ways. Turk learned from both his

own message and his peer's when he discussed "Telling the Truths" that clarity was

necessary for mutual understanding. Ek said he learned some structural patterns

instructed in class which reoccurred in the Triampaet group messages.

This suggests that the participants were conscious of their weak points in writing

and while reading their peers' messages, they noticed their uses of those points in their

texts. By this means, the participants perceived impacts of their peers' messages on writing development. Kang, on the other hand, compared his writing with his peers and learned from them.

> *"Friends' messages enable me to compare my writing with my friends'. Tee wrote better than me. His text on stem cell research revealed his ability to write with less Thai language system than me. Yuth was another friend who wrote so well." From the comparison, I could figure out where my writing problems are and I'm learning how I should correct them (August 28, 2002).*

Po, a student with the top score in English entrance examination, stated that he learned some new linguistic elements form his friends' posts.

> *Some messages on Triampaet helped me see new ways of expressing an idea. I never used those structures before. I could adopt some of them in my future writing (September 2, 2002).*

Others could learn from Po's messages too. Ken said,

> *When I read Po's message, he's very good at conveying his thoughts through the use of expressive words (September 2, 2002).*

At this point, it seems that the students with different language proficiency levels gained benefits from peers' messages at different degrees. Po might have acquired some while others might have learned a lot more from Po. In whatever cases these might be, in supplement with the solid grammar background of Po, his frequency in writing as well as models he could obtain from authentic texts online took great part in his English writing development. In brief, the participants' statements likely suggest that they found the online discussions advantageous to their writing. From their peers' messages, they could view how discussions were made, how ideas were reflected into words, and how their writing differed from their peers' messages.

Writing with Different Roles

It was observable that three of the participants played different roles in their writing. They posted their messages with the roles of 1) computer experts such as Po, who retrieved a page of the class homepage inaccessible for the rest of the class due to a broken link, 2) discussants of scientific issue, 3) knowers of specific situations related to the topic for discussion such as the common practice of doctors in securing their patients' lives, 4) writers with techniques to attract their peers' attention to read their messages and their active reactions towards his message, those techniques such as use of icons, pictures, questions etc, 5) critiques of peers' group project, and 6) supporters to encourage their peers to work on their projects. With different purposes for communicating with their real audience in many real contexts, the participants needed to shift their roles in the community of the Triampaet group to suit the purposes. The virtual community, thus, is like the real community where determinism of learners' role as novices in such environment as the educational setting is unlikely to be present (Warschauer, 2000). Different roles of the participants do reflect what happens in real life events.

Opinion and Information Exchange

Upon the question how they felt about the Triampaet discussion group, four participants revealed the discussion group assumed an appropriate floor for opinion and information exchange. They contended that the group enabled them to reach all of their peers easily and shared true stories of their field. Below was one participant's post when the group was discussing "Right to Death".

I had ever talked with 4th (year) *medical student. She told me that her professor said that " you must pump patient's heart every time him/her died* (he or she is dying)*" although he/she will never come back or even he/she* (will) *come back to live but she (the medical student) knows that he/she (patient) cannot live longer than 1-2 days. He (the professor) doesn't want to have problem with the patient's cousin about why* (the) *doctor doesn't help his/her cousin with all his effort. However, she* (the medical student) *told me that sometimes* (the) *patient's cousins want the patient to die because he/she cannot be cured and if the patient lives longer, it will waste much money (July 11, 2002).*

The Triampaet group enhanced the participants and other classmates to exchange information related to their field. The message showed the writer's role as an information source of an opinion of the medical professor on what would happen when the minute of life and death of a patient finally came and what the doctor should do. It intrigued their peers' interest as they knew that this reflected real life situations that they might encounter in future. The participants found the Triampaet group a floor for interesting discussion on the topic less likely to be discussed in their daily interactions.

Awareness of communication process and its difficulties

Discussing in the Triampaet group made all the participants realize how important communication was. In an interview, Po talked about the gist of communication---to understand and to be understood. He cited an example of his correspondence with Ken on telling the truth. Po posted a message on telling the truth and received a response from Ken who seemed to argue against Po's ideas. At first, Po thought the argument was made due to the misunderstanding of Ken. His second thought influenced him to think about his own message if it was clear enough or not. At that point, Po believed he shared the same opinion with Ken but Ken got it differently. Such reflections enhanced Po's reactions to Ken's message by giving explanation concerning what he intentionally meant.

Unlike the interactions between Po and Ken, those of Turk and Ap appeared

controversial. Kong, dissatisfied with Ap's "attack" against Turk, jumped in to show his

sympathy for Turk. The following are their messages.

From: Turk
Date: Wed Aug 21, 2002 11:45am
Subject: *Mistake & case2*
Hi!everybody
About the discussion in class today, my topic is "Mistake". Its main idea are how the mistake made by physician can occur. Sleepless, pressure, an incomplete data causes the mistake. Some error should be disclosed this is depend on each situation. And if physician will reveal the mistake he should ask opinion from other physicians and if possible by an institutional ethics committee.
To tell the patient, the physician could tell the patient by softly way to make he or she trust in and follow.
In case 2, I think if I tell the truths I will have a lot of complains and the legal process will be made. Perhaps I will be asked to quit my careers.

Turk reflected that when he started to write this message, he found it a

considerably difficult topic to discuss. He said he could not express himself well enough,

putting himself in the situation like that. To some extent, he thought his stance might be

criticized. As expected, he received a 'harsh and direct attack' from Ap.

Date: Fri, 23 Aug 2002 05:02:17 -0700 (PDT)
From: Ap
Subject: Reply turk's opinion
To: triampaet@yahoogroups.com
I do not think (I) like your opinion that you will hide the truth. If you hide that you was wrong, you may not be asked to (get) out (of) your jobs now but in the future somebody surely know that you were hide the truth. At that time you will be in serious trouble. Moreover, if you can hide that you are wrong and lead the patient (to die) died, you will think that your next miss was simple and you will hide it again. However this is my opinion.

After reading the message, Turk revealed,

I was shocked at first to receive such a harsh and direct attack on my idea about mistakes! I didn't feel angry or upset about his reactions to me. I understood that his

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response like that was due to my unclear and ambiguous messages, my language problems. I do wish to explain to him what I really thought, but I couldn't through the Triampaet group. It's difficult to express myself in written English (August 30, 2002).

From: Turk
Date: Sat Aug 24, 2002 8:40am
Subject: Re: Reply chenajitpun man's opinion
    --- In triampaet@y..., Ap <a_ap8621@y...> wrote:
    I don't mean to hide the truths to the patient mann! I mean in the question in case 2 (please read the question) said that will you get sued if you tell the truths to the patient and I said that if I tell the truths, I will be sued and will be asked to quit my job for sure.
                  Thank you

It is interesting that Kong responded to Turk, after reading the arguments between

Turk and Ap. Kong wrote with a more friendly and considerate tone to Turk.

From: Kong
Date: Sat Aug 24, 2002 5:52am
Subject: Emm..... mistakes 2
    Hi,
    According to Turk's opinion, it is truthful that everyone is afraid of losing jobs and particularly being coped with law progressions. But in my own opinion how can i go on my life with the hided mistake?
    I believe that everything will be not too bad if you tell the truths.
    So, keeping the honesty and facing the problems are what I will do if this case happens to me, myself.
    And....don't forget that you still have friends, all of us willing to help you na Turk na !!!

Kong reflected later that Ap's message was offensive and he was not happy with

it. "*Ap was too aggressive and mean to Turk.*" Kong believed that it was alright for

individuals to think differently because there was no right or wrong answer. The

Triampaet group was the forum to express opinions, not attacking others because they

didn't share common views over the discussed topic.

My feeling towards Ap at that moment was strong. I was driven to strike him back for Turk. I could position myself in Turk's shoes. We, human beings, can make

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mistakes, which no one desires to take place. All we need to do is to try our best to avoid making them. If, in an unfortunate case, we make mistakes, we need to find the best solution for our patients (September 2, 2002).

Thanks to the English language, Kong expressed that he could reduce the degree of dissatisfaction and control his emotions well enough to soften his severe reaction to Ap's message.

If I interacted with him in Thai and face-to-face, something unpleasant could happen. (We might have quarreled.) *Instead of addressing Ap, I switched to Turk, telling him my opinions and showing him that he would not be left alone when in trouble (September 2, 2002).*

This set of data shows that communication is a complex act. Its process includes invitation of both agreement and disagreement from their interlocutors, message conveyance and interpretation, and opinion exchanges. Through group discussions, the students situated themselves in active roles of communication in English. They grew from the stage of reading English texts for understanding to the stage of thinking and evaluating information for shaping their own ideas for discussion.

Cognizance of Audience

Participation in the Triampaet group discussion featured audience in all of the participants' minds. This is because they positioned themselves as readers of messages posted to the Triampaet group, looking for information from Triampaet activities in discussions on different topics such as cloning, and recommendations of Web sites potentially useful for group projects. In the position, they had encountered difficulties when reading their peers' messages such as unorganized pieces of information or uninformative recommendations to Web sites for group projects.   Recognizing such problems, the participants became thoughtful when positioning themselves in the role of

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the author i.e. they tried to make their messages clear, organized and informative for

audience's profits. Ek revealed that he took two roles in writing an English text. The

first role was being a writer with messages intentionally to convey to his readers. He

outlined pieces of information and started writing based on the outline. Then, as a reader,

he read his message and checked whether he could understand it or he should shuffle

some pieces of information to make the message comprehensible.

Ken also thought like Ek that the writer needed to be responsible for his/her

audience. Before offering his peers information concerning interesting Web sites for

their group projects, he learned from his experience in using the URLs recommended by

some group members for his group homepage that they were not quite useful and it

wasted a lot of his time in accessing those Web sites but not getting required information.

When it was his turn to make contributions to other groups, he added detailed

information of the Web sites he would recommend so that anyone interested in them

could seek for more details by clicking at those links or they could ignore information if

it was not what his audience were looking for. The following is an example of Ken's

email suggesting Web sites that might be useful to any of his peers.

> *Do u know that in each year million of people suffer and die from every type of cancer. It makes us worry when someone who we know get it.*
> *This is the some of interesting website that I searched and read it. .I think it will be the useful information to your group. Let us see.*
> *http://www.acutcmdetox.com/cancer/cancer.html Thai website tell*(s) *us about the cause of the cancer briefly. You can get the idea about the cause of the cancer.*
> *http://zdnet.com.com/2100-11-530156.html?legacy=zdnn this Web page tell*(s) *you about why the mobile phone can cause the cancer .I think you should get it to your Web page because nowadays the phone has more influence in our life. It makes your Web page more attractive. Trust me please (July 13, 2002).*

The data above shows that the students became conscious of significance of the audience when they performed writing activities that required them to be information consumers and providers. In such a context, they were aware if their message would be useful to their readers or clear enough to be understood. Then, they selected the way that they found effective for communication. In Ek's case, he edited his message before posting it. On the other hand, Ken offered details for his readers to make a decision which recommended Web sites would be related to their group projects.

Critical Thinking

Interactions through emails stimulated participants to think critically about the topic under discussion in relation to their points of views or and their peers'. For example, in discussing "Telling the Truth", they needed to gain some background knowledge of procedures in telling patients and their relatives about the patient's conditions through reading an online text. Then, they chose one of two cases which provided specific situations plus a question for learners to react to it. From this point, learners would react to those with different opinions, supporting their arguments with reasons to convince their partners of their beliefs.

Critical thinking could be seen in two major areas: their writing development and thinking process before discussing with peers. To develop their English writing, they started from reading the text for comprehension and then, screened previous posts in the Triampaet group. Ken observed the listserv activities, read his peers' messages and compared them with his. The self-evaluation determined what to learn in order to catch up with peers. To do so, Ken set his own criteria to judge peers' writing: their weaknesses and strengths while developing his writing.

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I evaluate my friends' writing from the use of connectives/ modifiers, and vocabulary which is not too general. …When I read Po's message, he's very good at conveying his thoughts through the use of expressive words. However, sometimes, when he writes in a hurry, his text may not be as I expected. Another friend whose writing impresses me is Golf. I observe (Ken sat near him.) Golf's writing. He spends some time thinking and then starts composing his message. His organization of thoughts is very good in that it enables him to communicate very clearly. His message shows the flow or smooth move of thoughts and his repertoire of vocabulary (September 2, 2002).

Regarding his thinking process before discussing with his peers on Triampaet group, Ken recalled that the activities on the listserv required him to think about how to cope with the problem in a given situation such as telling the truth to the patient at the terminal stage. In addition, he also needed to think of reasons to support his decision of what to do so that he would be able to convince the list members.

It is also remarkable that posts on the Triampaet group could shift his way of thinking. Ken said that when he was discussing a topic, he held a strong belief that his opinion was absolute. This may be because of a lack of opportunities for him to make arguments and thus, exchanging ideas with others enabled him to realize that there was not only one solution to a problem.

Ken found himself more matured through contemplating his friends' posts which asserted their different positions over the same topic. Their opinions were worth-considering and sounded reasonable and substantial. The experience brought him with being more open-minded and enthusiastic to accept or argue with his peers.

I discussed a case in "Breaking Bad News" and read Po's reaction to it. As soon as finishing reading his message, I felt like responding to him immediately. I wanted to convince him to agree with my opinion. I believed my view on the issue was formed from a better angle and disagreed with what he stated/asserted. But when I received his response, I also perceived that his assertion/argument sounded not less substantial at all. This is another circumstance that changed me to become more mature. I'm more open-

minded and willing to listen to others, learning from them, and synthesizing data before finalizing my own opinions. Yes, I like discussions and treasure them as a source of knowledge that I could co-construct with others.

In addition to Ken's feeling positive towards discussions in the Triampaet group, Kang, Ek, Po and Turk also loved discussing online because it was fun and thought-provoking. Ek stated:

In reading medical ethics, I need to understand them and to contemplate how to discuss them at the same time. It's not reading for comprehension only but it's also thinking of an interesting part if I agree or not with it (August 28, 2002).

Kang also added,

Discussion was a fun, and very interesting activity. I preferred it to reading long texts and answering to questions about the texts. Doing discussion, I usually read the text rapidly to get the ideas about the text. Then, I'd contemplate them against my experience and background knowledge in order to finalize my own opinions and put them into words. For example, today we read about a male senior unknowingly suffering the abdominal cancer at metastasis. To respond to this problem, I started from thinking of options for this guy and I came up with two. One was telling him but he might be in worse conditions (feeling discouraged and desperate). The other was not telling him but he would become worse anyway. The problem was which option would render more devastating outcome. If I told him, there would be two consequences. One was that he could accept his circumstance. The other was that he might not be able to stand the truth. Now, I needed to select which option was the best from my point of view, and chose to do accordingly (August 28, 2002).

Like Kang, the other participants contended that the topic for discussion was very important. Ek said that current topics in real life such as the new policy of this government for the hospital to cure any disease for 30 baht (approximately 75 cents) should also be included. The findings also revealed that too specific topics narrowed ways to respond and did not stimulate members' interests to share opinions. This is because there was a high possibility that almost all would say more or less the same and that did not intrigue their interests to read what others said. Too general topics, on the

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other hand, would make it difficult to discuss as well because there were so many cases, and many conditions to think about. The consequence of both types of topic would affect their composition.

Enthusiasm to communicate

All participants except Ek, who preferred giving opinions on a case to arguing or discussing with the online members, found Triampaet Group a forum for them to communicate with peers in English over topics that they hardly discussed in Thai. Though it was a big discussion group that, sometimes, made them feel overwhelmed with the great number of emails in their mailbox, they could be themselves to express their trains of thoughts without any interruptions or influence from peers. They enjoyed voicing their opinions and responding to their peers. Po revealed in an interview how excited he became when he read his friend's reactions to Po's opinion.

(About discussing topics in Triampaet), I felt very happy when I got a message from my friends, for example, Ken. I wanted to respond to him immediately. I got so excited to know that someone read my message and responded to me. Actually, I thought (about the topic of Telling the Truth) in the same way as Ken did but he didn't understand what I had written. I mean the way I wrote couldn't convey my intentional information to him. So I wrote him back to explain to him what I thought (September 2, 2002) .

Ek was comfortable to express his opinions but to argue with others on differences in opinions was not easy for him. "I don't like to argue. I prefer listening to others' opinions more than expressing mine (October 4, 2002)." But when he was required to discuss, he chose to discuss with those with whom he felt close and comfortable to make arguments.

When entering the Triampaet Group, I 'd look for my close friends' names and clicked at their messages. Knowing what they think over some particular issues, I'd interact with them more comfortably because I could think independently and differently,

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not having to worry if I'd offend them or if I'd be mistaken. I am sure that these friends of mine take our argument on the basis of understandings and forgiveness. I'm not confident to respond to others. We are not that close. What if I couldn't make myself clear enough and they misunderstand me? You know, my English is not good enough to be certain that what I write reflects what I intend to. That is, under unforeseen circumstances, I may hurt their feelings due to my English deficiency or miscommunication. I am afraid that such impacts may weaken our relationship (October 4, 2002).

In the case of Ek, the Triampaet group did not make him an enthusiast to communicate in English with his peers. This may be due to many reasons. First, it may be his own personalities of being reticent and in need of vigorous support. Ek did not make many close friends in class. Second, due to his being compromising, he did not like arguing against anyone. Moreover, he had insecure feeling of his own English abilities, he did not find discussions in the Triampaet group relaxing and motivating enough to communicate with others in writing. His awareness of his deficient English proficiency was also important. All of the reasons above explain why he preferred discussing with his close friends if discussions were to be carried out.

In the current study, it is also true that the participants developed the positive attitudes towards English on the basis of its applications for their real life benefits (Lam, 2000). They felt that English had its practical value for them. The participants attempted to make use of what they had learned in class e.g. grammar and vocabulary or skills they had practiced e.g. reading skills, as an instrument that enabled them to decode information of their interests in different contexts. Under such environment, the participants had passion to engage themselves in performing authentic activities. Apparently, there was tendency that more exposure to English in authentic contexts may

have provided the participants with advantages in addition to the content they expected. These may include development of English proficiency, vocabulary and structural patterns.

It can be concluded that all activities, namely, Web site construction, WWW reading and the Triampaet group discussion collaboratively promoted the participants' writing development. Their readings online propelled them to authentic texts on topics of their interests. They perceived that they had acquired, together with their project content, new vocabulary and English structures commonly used through their Web research. Then, they applied them to their own texts to be published on the Internet.

The Web site construction project, on the other hand, enabled the participants to develop their writing in two ways. First, the participants learned to write by writing what they had passion for, and with their level of language proficiency. Second, as much eagerness as they felt to learn more about cancer, body building, stem cells and yoga themselves, the participants wanted to disseminate what they had acquired to friends and others in ways that would enhance their insights into their stories. They used pictures, linguistic devices to accompany their written texts, and Web page organization to inform their audience of topics included in their Web presentation. Their care for the audience motivated them to do their best for writing project quality. However, with time limitations, they wished they would have been able to do a better job.

Last but not least is the Triampaet group discussion. All the participants except Ek found writing an interesting complex process of engaging themselves with the topics of their future career. They found writing in this mode the interactions between them and

their audience in relaxing environment. Communication and mutual intelligibility became their primary goal. That was the reason why they read and reread their messages before posting them to the discussion group.

However, some participants, later, wrote informally, feeling the Triampaet group the community of close friends, not necessary to care so much about grammar as far as they felt their messages carry their meaning clearly. All reported their fluency in writing i.e. they could combine their ideas with writing structures and organize them more quickly. They all had positive attitudes towards English writing, which, they reported, may have affected their formal writing e.g. writing in the final examination. They perceived that the flow of thoughts accompanied with words composed with English structures carried their intentional meanings. At the same time, in addition to being writers, they could position themselves in other roles such as readers, knowers, learners, and evaluators. Under the three contexts of Web reading, Web construction and the Triampaet group discussion, the students could notice their growth of English writing.

Summary

This section describes the participants' perceptions of the Internet at the university level in three aspects: reading, Web construction and online discussion. The students found reading from the World Wide Web facilitated their English competence. They could acquire new vocabulary and English structures from multimedia features incorporated into the Web sites they visited. Online-dictionaries, cross-referenced Web reading and access to online texts based on their disciplines were enhancers which made English reading accessible for them. For Web site construction, the students could relate themselves with their homepage because it was initiated by themselves. To implement the project, they needed to outline and design the pages. They became more concerned about their writing quality and thus, reread, revised, modified and corrected their drafts before uploading their homepage on the Internet.

In the Triampaet group discussion, the participants viewed it as a comfort zone where they felt relaxed to express their opinions in English on the topics related to their future career and without interruptions or peer/time pressures. Posting to the groups changed attitudes of those with negative to positive attitudes towards English writing both formal and informal contexts. The students found communication more meaningful with real audience who shared the same interests of the topics of discussions.

Research Question 3

Do the participants' perceptions of English learning/writing in the Internet-integrated environment have impacts on their writing development? If they do, what are they? If they do not, why do they not?

All the participants perceived that English learning in the Internet-Integrated environment have impacts on their writing development. I will present the findings with qualitative data and with quantitative data. For the latter, I will present the results of the participants' writing development based on their compositions collected at two different points of time throughout the semester.

Before reporting the findings aforementioned, I would like to identify the types of activities for the English class: classroom learning, MedlinePlus, Discussion Board and Web construction. The participants, then, described each activity and its benefits. The following is the summary table.

Types of Activities	Description	Benefits
Classroom learning	Learning linguistic Elements and Basic Contents on Topics Related to Presentation on MedlinePlus, including vocabulary	Acquiring essential elements for online activities
MedlinePlus & other Web sites	Reading texts on diseases, symptoms, causes, treatment etc.	Getting knowledge in the medical area Being aware of language use
Discussion Board	Interacting with peers on various topics	Exchanging opinions Observing peers' writing Learning to write from peers
Web Construction	Doing group project work on the topic of learners' choices	Learning about the topic of the group's interest Distributing information to other surfers

Table 4.3: Class activities

4.6 Impacts on Writing Development: Qualitative and Quantitative Findings

4.6.1 Qualitative Findings

4.6.1.1 Development of Authorship

The activities on the Internet, Triampaet group discussion, and Web construction made all the participants aware of their crucial role in writing as authors since they needed to engage themselves in presenting their ideas to others. They had decisions to make in order to write (Lam, 2000; Kramsch, A'Ness & Lam, 2000). In this research, the emerging themes of what the participants considered include audience and learners as authors.

Audience

Writing to the Triampaet group and Web pages broadened the students' audience to include their classmates who were the Triampaet group members, and the public who could get access to their Web sites, in addition to the teacher.

In answering the question why the participants thought of audience in constructing their Web pages, they said that they aimed at enabling audience to understand their messages clearly. Many groups learned, from their searches in the cyberspace that as audience of those Web sites, they found that the content of the subject matter was quite difficult and that obstructed their comprehension. From that point, they thought further how to design their Web site in order to be audience-friendly.   For example, in Turk's group project on Body Building, the group members were quite confused about the definition of body-building and equipment used to build muscles after scanning Web sites about the topic. It took them a lot of time to do research and found

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the information. Thus, in their Web site, they included the definition of body-building

and pictures of equipment so that their audience would be able to match the names of

equipment with the pictures correctly and understand their Web site presentation.

Like Turk's group, Po's was conscious of significance of audience via their status

as once audience. Po stated that visiting other Web sites with focus on cancer, he and his

friends felt that the information was rather technical, difficult and sometimes excessive to

digest. They had to read a lot from different Web sites and had to read for many times

until they understood. Then, they decided what topics to be included on their Web sites.

When taking a role as authors, the group members agreed that the presentation of the data

should be readers-friendly.

With the data collected from the selected Web sites, we designed how to present it.
We outlined main topics and sub-topics and presented them in the way that would best
enhance our audience's understandings. We provided on each page information that
would not overwhelm their reading i.e. an amount of information that fits the size of the
computer monitor, and links for the audience to decide if they want to know more about
topics embedded in the text of the page (August 7, 2002).

In addition, the participants' awareness of audience could also be seen in their

attempts to present their Web pages distinctive from others. In the cases of Ken's and

Po's groups, they said they explored the WWW in order to check what had already been

presented on the cyberspace and what they could offer to their audience. In an interview,

Ken elaborated this point in his words:

We want our audience to view Yoga from different angles: Yoga as an alternative
for health with the balance of mind, body and spirit, Yoga as science, and Yoga in
research (August 9, 2002).

The above excerpts suggested that the Internet led the participants to keep

audience in mind for Web page construction. Their responsibilities for audience showed as they made their attempts to provide readers with information in the layout that facilitated comprehension.

Learners as Authors

Some participants showed their potential of becoming good writers---to be able to communicate with their audience effectively. As the author, the participants contended that they needed to consider factors that would direct their messages in ways that their audience would be able to comprehend. In Web site construction and Triampaet group discussions, the participants said that those factors were: content and its organization, language structures and vocabulary, visual aids, information sources and editing.

Text Organization

The participants studied text organization from interactive tutorials of the Web site of Medlineplus and found on it great illustrations of how to organize ideas in their writing. Ken contended that the page design enabled him to understand the writing process in which the author needed to outline the topics to be included in the text and under each topic, the author's work was to fill out data with a thesis statement and/or details. Ken claimed that after setting an outline of what to write and follow his outline, he could develop his text in a more controllable way, not writing whatever came up to his mind at the moment of writing.

Now, before I write, I'll draw an outline to see what the issues I'll include in my text. I find that this way helps me write with organization. When rereading it, the text has its flow, no confusion and I'm happy with it. I'm aware of what I'm writing and its extent. Meanwhile, I know that after covering that topic, I'll move on to the next one (October 4, 2002).

For Turk,

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After gathering data, we plotted our outline to be our guide in writing. We made drafts and allocated work to our group members. Afterwards, we had a conference to check how each part of the work was...too much, too little for modifications (Augus 30, 2002).

Editing

From interviews late in the semester, the participants observed that they had changed the ways they used to write. First, knowing the public could access their Web pages, they chose to write in a formal style, not the informal one like when writing to the Triampaet group. Second, instead of writing the first and final drafts, they wrote many drafts. They kept reading and rereading what they had written, and finally revising it. This was because they needed to check accuracy of information, English structures and spelling. Finally, the participants exchanged their writing for their group members to double check its quality. In Po's group, Po acted as the group editor. He revealed in an interview about his job.

My group members sent me their parts. After making some changes, usually grammatical errors, I would talk to the members about the changes and ask for their opinions if they agreed with me (September 26, 2002).

Po talked with a light mood when looking back at his past experience as an editor, that one remarkable change he made was when he discovered that a group member misused the terms "gall bladder" and "urinary bladder". Po acclaimed the significance of proof-reading and editing as an essential part of writing.

Both terms are totally different. Without editing, we would have lowered our credibility from our readers (September 26, 2002).

Writing with Different Purposes

In the Triampaet discussion group, the participants' authorship revealed when

the participants interacted with others. Their messages showed that the discussion group

entailed the participants' encouragement to write with a variety of purposes: giving

information, making suggestions, requesting for assistance, exchanging opinions, and

encouraging peers. Illustrations could be observed below.

Making suggestions
Ken emailed to the online group and suggested Web sites for stem cells.

I would let you know about the interesting source for your project work
and I think these links will make the advantage for your project work. For me the stem
cell research has both good and bad results. It make the good for all people if
research(ers) *want this research to help the people who want to have a child not the*
perfect child such as the baby who has the face like Britney Spears. This is the example of
the misused purpose of the research. Please click to these na.
http://www.stemcellresearchnews.com/ ^_^ this website show the movement and other
opinion of the stem cell research If you have the update news of the stem cell research on
your Web page. I think it make yours more interesting…(July 11, 2002).

Exchanging Opinions
Po expressed his opinions on "Telling the Truth".

I think I would tell him the truth. The patient in this case does have an
extremely harmful disease which must have an incentive care. I think he should consider
himself what he would like to do next. If he still goed(goes) on a travel, the doctor should
advice him to beware of the risk factors he may get while traveling (August 27, 2002).

The findings on authorship revealed that the participants were capable of

authoring their own texts. Learning from their first-hand experience as audience, they

realized the significant factors that would enhance their text comprehensibility. They

found they needed to provide audience with devices to deal with complex language such

as illustrations, pictures, and use of appositions to define technical terms, etc.

Writing Style

Once the Triampaet group became a friendly forum, learners felt relaxed and

close to one another so much that they wrote a message as if they were talking. Messages

became more conversational. Learners used more icons to represent their moods e.g. smiley face. Some used pictures to accompany their messages. Some mixed some Thai words written in English characters, to signify the soft tone such as "na" or "la gun" and politeness e.g. "krub".

In this study, only two participants used the elements in their messages. Po used emoticons to show his feelings to his reader.

Sawasdee krub, Ken
First, I am very happy that someone has read my mail. Thank you very much .

Like Po, Ken made his email messages more meaningful and animated in the manner close to those when he was talking to his peers in the sense that the messages could express his feelings during interactions through uses of icons, pictures, different colors and styles of fonts to attract his peers' attention. The following is one of his messages that he aimed to stimulate his peers' attention and responses to the topic of death.

From: Ken
Date: Mon Jul 8, 2002 10:29 am
Subject: Think and discuss na krub
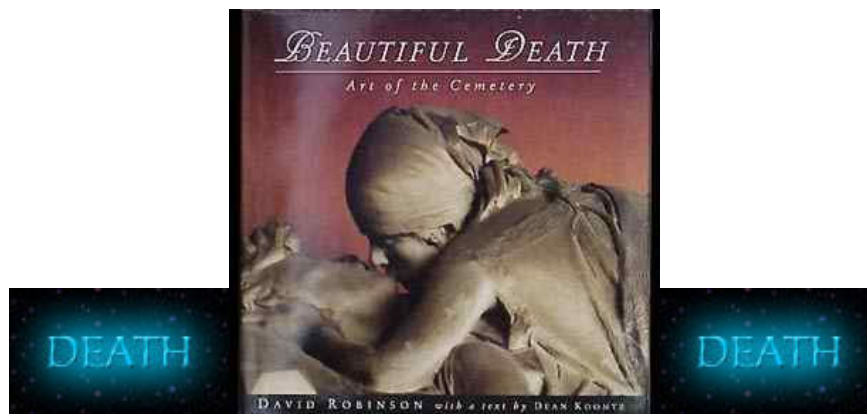
Sawasdee krub everybody

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I would like to know your opinion about this subject, please let me and our groupsknow by sending yours to chaken_2002@yahoo.com or triampaet@yahoogroups.com

Have you imagine that you have the opinion on topics such as the last period of AIDS or Cancer, u think that you will die soon but the physician try to make you live longer. Do you have the right to death? Do you know, triampaet yahoo group, that Belgium have the right to death?

Do you think it immoral? unjustification?

In an interview, Ken contended his reasons why he invented his messages with

pictures and emoticons.

It was like giving life to those words. Plain texts, they may…I felt they (icons or pictures) represented my feelings while writing those messages. For readers, when continuing reading and seeing the symbols, they may smile and feel happy while reading it. For pictures, I put them on my message in order to trigger my peers' interest in reading my message and responding to it (August 19, 2002).

In addition, Ken found that texts simple, full of statements might be too

boring to read. Thus, he thought of ways to write to catch his readers' attention, to ask

them questions, challenge them, or engage them in the discussion. He said he got these

strategies from reading online texts.

In Ken's opinion, his message should appear more than being text-like in

order to attract audience. In his words,

Before writing, I thought of how to attract their attention and urge them to respond to me. So I searched for a book about the issue of death from the Internet. I copied and pasted the picture of the book cover onto my email to my friends.

With pictures, he further thought about how to compose his message and

make it interesting for readers to involve with. Ken revealed about his writing technique

of raising questions directly to them as the following:

I tried to write in the way that my friends would feel the topic was directly

addressed and related to them. Instead of using only statements, I used questions that I directly asked my friends. The question "Have you ever thought…" may stimulate them to look back if ever they have had such a thought before. If they never thought of it before, the question might stir their thinking. On the other hand if somebody asks me, "Will this doctor tell the truth?", I may want to react to the question at one level. Yet, the question which involves the respondent such as "If you were the doctor, (would you tell the truth?)", he probably needs to react to the question more because he imagines himself in the position in that situation (September 2, 2002).

In addition to searching for ways to express himself while engaging his readers by asking questions, or putting them into a situation, Ken referred to what other experts said on some topics of discussion in his messages. He found this beneficial for his readers and himself to learn what people in the field thought about the topic. To the question why Ken included those experts in discussion, he replied:

In my first email to the issue of Right to Death and my later email, I mentioned what happened in Belgium, Holland and the US. I didn't mean to refer to those references intentionally. I had searched the Internet and read articles about Right to Death. When I wrote, the data I had digested just popped up so I included them in the messages. I think that discussions solely within our group may narrow our view on the topic. Learning from the vantage point of view of those directly concerned about it might enable us to acquire something we may have not thought of before. It was like expressing our own opinions plus others' with direct experience or expertise would be the stepping-stones for discussants to think a step further (September 2, 2002).

It is apparent that the Internet environment played an interesting role in the participants' writing styles. It could make interactions between interlocutors lively while the participants' access to information sources in the cyberspace enriched their information and enhanced their dissemination of the knowledge to others in the discussion group. Also, they not only found a place to position themselves in their messages but also encouraged their audience's engagement in discussions on the issue of their field.

4.6.1.2 Syntactic Development and Vocabulary Expansion

From all of the participants' perspectives, the Internet enabled them to reflect

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their English in use in comparison with the listserv members of the Triampaet group. They learned to write through reading authentic texts from Web sites and put the acquired knowledge in writing their group Web sites. Ken revealed that he felt excited to be in the English class with the Internet and to have access to messages of every member. Together with such a feeling came his critical comments on his own writing after reading his peers' messages:

> *When I read my friends' texts/messages, I discovered that some of them used more advanced vocabulary than I did. I mean my vocabulary is simple and easy when compared to my friends'. In terms of structures, I shouldn't use just "subject, verb and object". I should include complexity in those sentences, more modifications.*
> *The sentence patterns I used can be described as stereo-typed, sticking with simplicity. However simple my writing might look, the writing process took me a long time to get the final draft…I thought I had less English writing skills than my friends. I couldn't use complex sentences or advanced words like them. I would like to be good in writing and reading (October 4, 2002).*

When examining his post in July 11, 2002, Ken repeated the term "the doctor" five times throughout his message.

For the other participants, they entered the platform where their writings were placed among other learners. Comparison of their work with peers' and evaluation of their English writing ability were inevitable. It motivated them to develop their writing though it also discouraged some students at the same time. This section presents the participants' perceptions of their writing development with regard to syntax and vocabulary. The answers to the question if the participants perceived their writings changed in any way are also included in the topics of fewer errors, syntactic complexity, and vocabulary expansion.

Fewer errors

The participants stated that they made fewer errors in their writing when

compared to that when they first started. They thought that their online reading with

awareness of content and syntax, as guided by in-class instructions, their frequent writing

practices to the Triampaet group, and for their group project had impacts on reduction of

linguistic errors.

Ken's biography, his first writing, showed his inaccuracy of 'English

verbs'.   The bold words were incompatible tenses.

*(Cl-1)I **started** to learn at Bangpidlang school, (Cl-2) when I**'m** in Pratom 4
(Grade 4) (Cl-3)I **studied** at Marndanusorn school. I **studied** high school at Trattakarn
school. After graduating I **go** to study the pre medical course at science faculty (June 9,
2002).*

The message above shows Ken' grammatical problems of tenses.

He used the mixture of both the past and the present tenses to describe his past education.

In addition to tenses, his three clauses (Cl-1-3) in the first sentence---the run-on sentence-

-- contained more than one messages and led to confusion. Four months later, his

previous mistakes did not occur. The following excerpt shows that he could reduce his

writing errors.

*I think, I should tell him all of the truth (cancer in pancreas). I think, his wife
wants him with her more than the around the world tour. I think the good health is best
wealth of being human. I think he is ready to the treatment because he just has retired so
he has the time enough (September 15, 2002).*

From the two excerpts above, it is clear that the second one had no problems of

tenses or run-on sentences. It seems Ken did a good job in terms of his use of

connectives to link two clauses together.

In addition to grammatical errors, another type of errors caused by

interference of Thai structural system in English writing through translation could be

found. Kang's revealed that one of his problem was Thai-English translation. He said:

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When you read my written assignments, you might find that I wrote Thai with English characters. I did translation, of course, from Thai into English (August 28, 2002).

Kang elaborated that there were differences between Thai and English grammar that word-by-word translation would not work. Depending on the Thai system caused lots of mistakes to write an English text. After being exposed to the Internet, Kang thought that his English writing improved.

Through lots of readings online, I think I've automatically collected increasing English expressions and structural patterns that help lessen Thai in my English writing. So I've fewer errors on my texts (August 28, 2002).

Like Kang, Ek faced the same problem. Below is an excerpt from his first email message. The bold type shows the interference of Thai into Ek's English text.

*For reading passage 'cloning', I conclude that they debated **about 'should or shouldn't have cloning'**. **In my mind, I think that** the cloning shouldn't be done. But if this will be done, this should be **solve all problems before** (June 18, 2002).*

At the end of the semester, Ek's work dated September 15, 2002, revealed his progress in English writing. Impacts of translation on Ek's message at the end of the quarter were not that intense.

After reading at http://cai.md.chula.ac.th/lesson/lesson4505, I know that he has severe cancer. I still is (am) *the same as the first decision in telling him* (the truth) *that he must be treated. The patient has severe cancer; thus, he must be treated immediately. His journey may causes death so he shouldn't travel.*

Both excerpts taken from the first part of Ek's messages show his writing development. Ek still made some grammatical mistakes as found in the message above; yet, impacts of Thai into English reduced its degree. This might be explained by Ek's own remarks that the more he read, the more he could acquire blocks of English expressions. When composing a text, Ek said it was likely that he could pick up some of those expressions for use.

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<u>More Syntactic Complexity</u>

Another change that the participants perceived was they could write longer sentences. With models from peers' good pieces of writing on the listserv as well as authentic texts from Web sites, most participants paid more attention to their writing, making more use of modifications.

Although Po did not find himself, having much trouble with English structures and rather found it comfortable for him to write, he became observant when reading texts on his selected Web sites. The familiarity with the language used to describe cancer enabled him to try some elements he had not used before. For example, in his later texts, he frequently used nouns in apposition, and different types of modifications. According to Hunt (1965), these features identify the writer's language maturity.

One linguistic development more increasingly seen in his later texts was the use of participial phrases, a group of words used to describe the preceding noun. Though the sentence is typified as a simple sentence with the combination of one subject and one predicate, the sentence with the participial phrases illustrated below revealed the writer's mastery of embedding the reduced form of relative clauses into the independent clause.

*In fact, the cancer can be divided into over 200 diseases **occurring in any parts of the body**. It begins with only a single cell **multiplying from time to time**. In the early stage, it can be cured. When out of hand, it will scatter to other parts of the body through the blood and lymphatic system which is harder to be cured.*

In addition to those phrase modifications, it can be observed that his text

contained more multi-clausal sentences. For example, the following text carried many linguistic elements at the advanced level such as the use of relative clause, noun in apposition, noun clause, coordinators, and present participial phrases.

*British scientists have found **that** caffeine and theophylline, **a related compound**, can block 1-3kinase **which** is an enzyme **having important role** in determining cell growth and death. It means **that** one day we can block the cancer cells. **However**, in the laboratory, scientists use high concentration of caffeine dangerous to men. **Moreover, if** we use this enzyme blocker for a long time, it may increase the risk of inflammation bowel disease.*

Applications of modifications or co-ordinations, both in the forms of phrases and clauses could also be seen in Kang's first and last Trampaet group messages, a student whose first impression of English writing was negative.

Kang's excerpt of his first English text in our class:

*My name is Paradon. Nickname is Kang. Graduated from ABCD. Now I'm 18 years old. I have one elder sister. She is studying at a university. My family **is** happy but sometimes* **have** ("is" and "have"---incompatible subject-verb agreement of "my family") **some problem** (plural form).
  My choice to study at PCM (fragment) *because I like the surrounding here. As I hear from other places, **other medicine classes of other university have much stress and pressure between others** (translation). I <u>**don't like**</u> that kind of surrounding. Then I <u>saw</u> the advertisement of PCM ("don't like" and "saw" ---incompatible tenses).*

His first message was full of errors of different kinds as listed in the brackets. In addition to the errors, his sentences were simple. In comparison with the message below, syntactic development could be observed. Errors were considerably reduced while uses of subordinators of different types (condition, relative clause, cause-effect, and contradiction) could be seen in texts. These examples reveal Kang's syntactic maturity in his text.

Kang's excerpt of his last message:

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I believe that everyone must have the mistakes and don't want to make them. Physicians are common people who can make the mistakes; therefore, in some opportunity, the mistakes may be occurred. If you make the mistakes, you should accept them honestly and try to find the best way to solve them. In normal case, you may reveal your mistakes to your patients although this can reduce the confidence of patients but this is better than feeling doubtful with their symptom by themselves.

Use of a variety of vocabulary

In the advanced participants, Po and Ken, careful use of vocabulary was apparent in their writings to the Triampaet group or in their Web pages. In order to expand his repertoire of vocabulary, Ken tried to use words found in his readings in writing. If the term was difficult, he would use it with a bracket of its definition, to remind both him and his readers of its meaning in the context.

In an interview, Ken stated that he just learned the term 'metastasis' and wanted to include it in his message to the Triampaet group for two purposes, that is, to reinforce its meaning in his authentic use and to remind the discussion group members of this new terms. So he used it in arguing that he would tell the patient with cancer the truth. Below is his message.

*In telling the truth, the topic related to ethic and the man who has the **metastasis (the last stage of cancer)**, I still believe that the most important thing of the man and his wife is <u>the existence of the life of him</u> (his life). I will tell the truth to him and I will not forget that I will pay all of my attention to cheer him (up), to treat him, and to make him get well.*

To make his messages readable and not limited to those simple words he had already acquired, Ken also tried to expand uses of his vocabulary by looking up words with synonyms . In his first draft, he used simple words he could think of at the moment of writing for the flow of his ideas, and then, in his second review, he would look up synonyms to replace the common terms he used.

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I want to use a variety of words. For example, I know the term "lack". Since I've already acquired it and don't want to use the same term repeatedly, I look up its synonyms from three sources, online dictionary, (www.m-w.com), language tools in MS Word Program, and a dictionary by Dr. Wit. I, then, get to know "deficit, deficiency, and shortage (September, 2, 2002).

In the case of Po, it was found that the development of his English writing came from his attempts to write in his own words, using technical terms found while collecting data on cancer on the Internet. He made use of modifications to explain difficult words, to give details, and technical terms with specific meaning.

*Surgery is often selected first. It is used to move a large amount of the effected area while making the least risk to the others. **The mastectomy, surgery to (re)move the breast,** is required when it is unable to do normal surgery.*

It is logical to conclude that the participants wrote English texts with a variety and sophistication of vocabulary. They used technical terms with their definitions and tried to use terms and their synonyms in order to make their writings readable and sophisticated. These examples also show that the participants cared for their audience's comprehension, and clarity of messages.

4.6.1.3 Fluency and Accuracy

Fluency and accuracy is another recurring theme asserted by most of the pre-medical students. The students thought that changes in fluency and accuracy in writing took place by the end of the semester. The following shows the findings on the issues.

Fluency

The research participants reflected that they could write fluently when compared to the start of the semester. Experience on the Internet activities such as reading online texts, discussing in the Triampaet group and writing for their group homepage enabled them to think quickly and put their ideas into English texts.

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At the start of the semester, one of writing problems that the participants encountered was being unable to write complicated concepts due to deficiency in the English language. This problem gradually reduced its intensity weeks later. At that time, to compose a message was very tough. In Ken's words,

I have a lot of ideas to write but I can't express them all in writing. My vocabulary and sentence structures are limited. The problem forces me to drop out what I find complicated to put into words (August 19, 2002).

Ken could notice his own writing development and expressed his satisfaction of his continual developing writing skills.

I think my writing improves. The more I write, the more vocabulary and structural patterns I've acquired. I can express my thoughts to a greater extent though not to the fullest like when using Thai (September 2, 2002).

He could compose his message more quickly after the mid-term than at the beginning of the semester. He speculated that the reason might be accumulation of vocabulary, structural patterns as well as grammar knowledge that he had seen repetitively from different topics in Medlineplus and elsewhere. Ken experimented using these elements in his texts until he finally acquired them through reading his peers' messages and writing his own to the Triampaet group.

Po found his writing improved especially when he worked on his Web page construction. He voiced difficulties in digesting information and in writing his Web pages. Yet, he felt what he attempted to do paid off. In Po's own words,

The difficulty of Web page construction I encountered at the beginning was to compose messages based on information from many sources in my own ways. The content was new and huge. Yet, the more I wrote, the more fluent my English became. When I write, I feel my ideas flow smoothly in my writing. After finishing it, I'd come back for revisions and corrections of mistakes. I think my writing has been much developing (September 26, 2002).

Turk also voiced the same experience. *"Conducting a project promotes my competence in computer and English. I have acquired great knowledge. Earlier, I thought slowly and could speak or write very little. Now, I can speed the processes up (September 2, 2002)."*

Ek shared the same feelings with the others. He relied on translation from Thai into English less than when he wrote in the first month of the semester. Earlier, he mostly found direct translation the only way he could use for his English writing. Later, he was conscious that he would think in Thai and translated it only when he needed to express difficult concepts. Yet, there were also times when he felt the progress he made reversed its directions such as when he had to depend on the translation strategy. Ek speculated that the reverse might be because of his less frequent writing to the group and that happened when he had to prepare himself for quizzes or mid-term exams of other courses.

The data above reveal the factors that enhanced fluency including confidence in and acquisition of English structures, vocabulary, and grammar. Once they were sufficiently equipped with target language elements, they found ways to process their ideas and express them directly in English.

Accuracy

In terms of accuracy, all the participants stated in the first month of posting their messages to the Triampaet group that they were anxious about and careful with accuracy of grammar. Later, while three participants stated that in their writing, they still paid attention to the content and correctness of their language use though they became relaxed to write more than before, two participants found the Triampaet group the stage where they wanted to communicate with friends freely. Ken made a reflection on his accuracy

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as something he paid less and less attention to through the course of time. He found that writing to the Triampaet group became informal and relaxing after developing relationships with his peers. Like Turk, Ken contended:

I think the way I write on Triampaet Group has changed. I remember that I was very careful about the tense and the like. As time passed by, I became more informal. Maybe it was the influence of my friends' whose messages looked and sounded friendly and thus casual. I don't care much about grammar or formality. I write for the sake of conveying my messages, communication.

Turk described his writing process:

(In Triampaet) *The language I used is easy. Easy vocabulary. Easy structures. I aim at achieving mutual understanding between my friends and me. Writing in this environment is like simultaneous reactions (after I read a message) to known audience, my friends. I'm not interested in language accuracy. This releases me from any regulations and there I could obtain fluency in expressing my opinions. And that includes no revisions of my message for corrections.*

It is worth noticing at this point that while vocabulary acquisition as reported by the participants was incidental, or resulted as a by-product of the main cognitive activity i.e. reading, the acquisition of structures did not follow the same learning pattern. In fact, conscious learning of structures in focus played a vital role in providing the participants with awareness of linguistic forms that would enhance comprehending of English texts with similar structures. Their exposure to those patterns in up-to-date texts of their interest and/or of their choices took a part in instilling them into the faculty where they could apply in writing.

4.6.1.4 Transgression of Focus in English Writing

Forms to content

With the growth of vocabulary and structures from exposure to the Internet, Ken realized that his writing developed linguistically. It was another stage of development stemming out from focusing only grammatical features, discrete points, in order to

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compose correct sentences to be graded, to underscore the essence of his messages in accompany with the appropriate way to write at the macro level i.e. from the outlining of what to write, filling out the outline with strings of words and structures in a more sophisticated manner.

It is also clear that writing became a more systematic and organized process for Ken. He attempted to use a variety of vocabulary and structures in his messages. This account was supported by evidence from the quantitative data finding on his writing development over the semester. The following are Ken's words, describing his next stage in writing development.

…forms and patterns gradually disappeared from my focus. I think I could push against my language boundaries. I find myself focusing more on the content. When I write, I'll think of the topic, its major points and minor ones and write accordingly. I feel more relaxed with writing, having learned/ internalized what and how to express in English. Earlier my thoughts emerged rapidly but couldn't be properly processed into words due to my language deficiency. Now I can express my thoughts more quickly than before (September 2, 2002).

Accuracy to passion

In terms of writing development, Po stated,

What I learned from our class activities is that I become observant with readings, peers' messages as well as online texts. I could elicit, not just the required information but also language in use that I could apply in my composition. (September 9, 2002).

The highest level of interest in learning/writing English of Po both before and after the English class may reflect the fact that he perceived himself as competent in English as well as in writing from the start. He liked the Internet activities, writing in different contexts and found them useful for his English learning and writing development. At one point, he stated,

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I now realize that good English writing results from the writer's passion to write and his messages. Accuracy in grammar, though it is important, is not the absolute measure of writing quality as I thought it was. With it, the message to be conveyed becomes powerful (September 26, 2002).

It is noteworthy that Po shifted his primary focus of writing on grammar to learning to write from his own passion. The key term, "passion" defined as <u>*a very strong interest in something that one likes very much*</u> (Collins Cobuild: English Language Dictionary, 1992), implies Po's relationship with his writing---self-engagement, desire to produce good pieces of writing, and intention to communicate with his audience. The characteristics he established when writing, he believed, would yield fruitful results. His writing contained other elements that good compositions should have such as coherence which had been his pains in his previous writings.

4.6.2 Quantitative Findings

The investigation of the students' syntactic complexity development in writing was conducted by comparing the first piece of their writing and the last one from the Triampaet group. This section addresses writing development in three dimensions: T-unit length, complexity and accuracy.

In this study, syntactic complexity was defined as the participants' abilities to generate longer texts with multi-clausal sentences. It was measured by the average length of T-units, and the percentage of T-units with dependent clauses. To examine the length, their texts were divided into T-units, and the number of words in each T-unit was counted and then divided by the total number of T-units. Below are the findings on syntactic complexity in writings viewed from the quantitative lens.
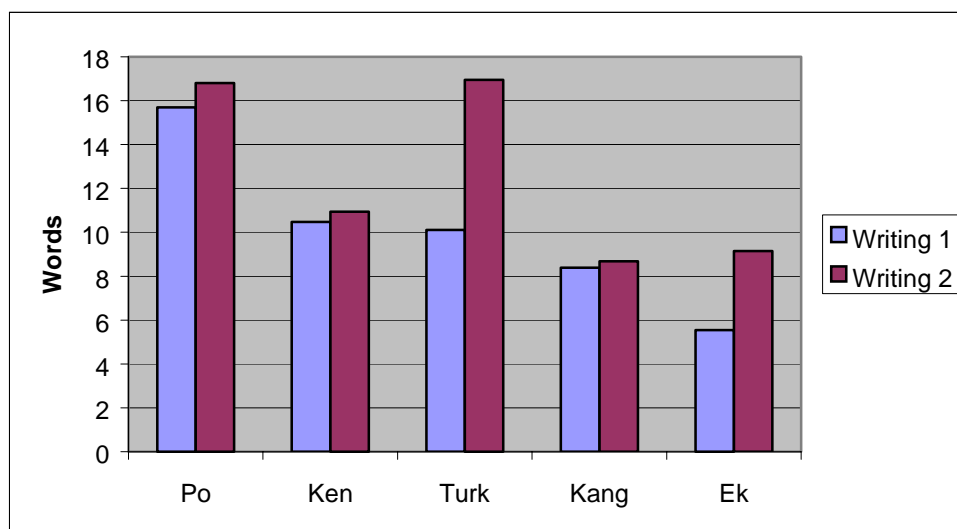
Figure 4.8: Average Length of T-Unit

Figure 4.8 shows that all the participants wrote the texts with longer T-units. The quantitative finding of increasing maturity of syntax confirmed the qualitative finding which stated that the pre-medical students under the study perceived their abilities to produce longer sentences. The assertion was also reflected in the following figure: the percentage of T-unit with dependent clauses.

The participants increased their use of dependent clauses, those linked to their independent clauses with subordinators such as 'because', 'though', 'since', 'when', 'if', 'which', 'that' (a complementizer as in 'Most of physicians think *that* it is not suitable to

tell some truths to the patient such as the last stage of cancer.) etc. This set of data

revealed that by examining across the five participants' texts, the increase of dependent

clauses grew between 16.67 % in Po and 33.34 % in Kang.

Percentage of T-Unit with Dependent Clause
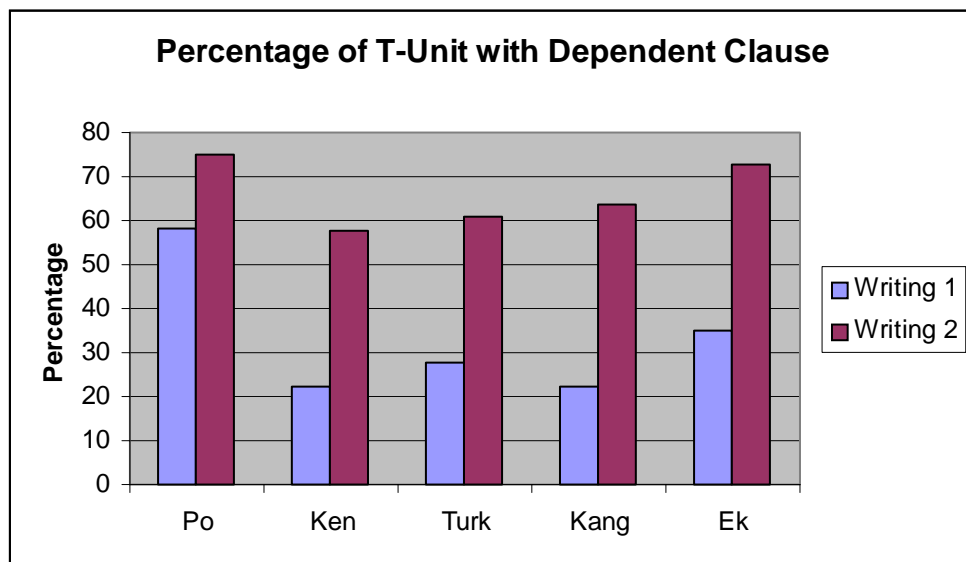
Figure 4.9: Percentage of T-unit with Dependent Clause

Many participants reported that their access to the Triampaet group had impacts

on their English learning/writing development. Reading their peers' messages, they

inevitably compared their English writing abilities with those written by the rest of the

class. As earlier mentioned, after reading and evaluating his peers' messages, those with 'high vocabulary and complex structures', he assessed his as 'simplistic and stereotyped'. He furthered that easy access to the online discussion group and the 'permanent' existence of those posts kept reminding him of necessity to find ways to upgrade his writings. He as well as the other students attributed their writing development to learning basic English structures from the formal classroom, exposing themselves to WWW for extensive reading, collecting, consciously or unconsciously, new vocabulary or structures and then, experimenting them in writing to the Triampaet group. The figures above revealed that the pre-medical students could write longer and more complicated texts.

In addition to the average length of T-units and the percentage of the T-units which contained dependent clauses, it is necessary that the error-free T-units be included in order to examine grammar accuracy in the participants' writings. Its measurement was conducted by the researcher and a native speaker of English. A small difference was found between the ratings by two experts. Inclusion and exclusion vocabulary errors among the sentence-level errors caused the difference. After a discussion, the vocabulary errors were decided to be included. With the vocabulary errors, the final ratings were almost identical between the two raters.

After error-free T-units (EFT) were identified, the percentage of EFT was calculated by dividing the total number of EFT by the total number of T-units, and then, multiplying the outcome with one hundred. The finding was illustrated as follows.

Percentage of Error Free T-Units
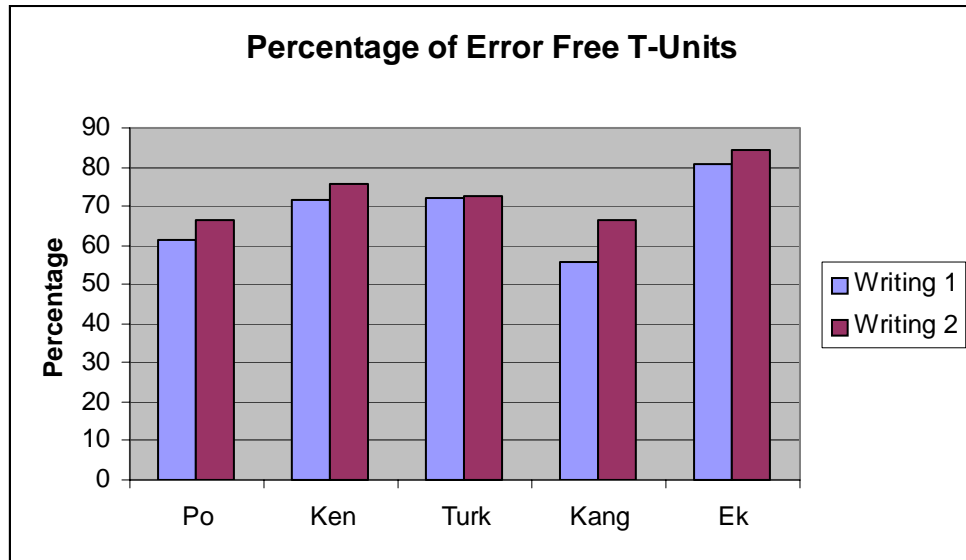
Figure 4.10: Percentage of Error-free T-units

Figure 4.10 reveals that all the participants' texts written at the end of the

semester to the group discussion list contained more error-free T-units than those written

at the beginning of the quarter. However, the percentage of the number of error-free T-

units of the two pieces of writings appeared slightly different. The gain in accuracy is

comparatively less than those in length and complexity. This phenomenon could be

speculated from three assumptions. First, the longer and more complicated sentences the

participants wrote might have caused difficulties for the students to write with great

accuracy. Second, due to the timeline of the study which lasted sixteen weeks, writing

development, which is an ongoing process, may not be markedly noticeable. The last

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assumption was based on the participants' qualitative account. They found the Triampaet group the floor where they could exercise new terms or structures found elsewhere on the Internet. The sense of risk-taking together with the perception of the Internet environment as a comfort zone switched the participants' focus on form to meaning for the sake of communication with the list members. At the same time, they intentionally experimented using new linguistic elements in the Triampaet group.

The quantitative findings reflected that the participants' writings collected at the beginning and at the end of the semester showed that the students produced longer, more complex and more accurate English sentences than they had done 16 weeks before. This can be seen from the increase in syntactic complexity and accuracy. The students could produce longer T-units with more multi-clausal sentences---an indicator of writing maturity (Hunt, 1965). At the same time, these sets of data also indexed the likelihood that the students would generate increasing EFTs. The findings aforementioned were parallel with those in the qualitative part.

<u>Summary</u>

Section 4.6 presents the impacts of the Internet activities on the students' writing development. The findings are based on both qualitative and quantitative data. The qualitative results show that the students developed their English writing process in terms of authorship, syntactic and lexical development, fluency and accuracy. Two remarks were made in terms of their transgression from forms to content and from accuracy to passions. For the quantitative part, the findings of syntactic complexity, accuracy and

abilities to use multi-clausal sentences supported the qualitative findings. In other words, throughout the semester, their writing developed as seen in their writing process and products.

In the following section, findings of strengths and problems in integrating the Internet into the English for Pre-Medical Students I class will be presented.

Research Question 4
What are strengths and weaknesses of the use of the Internet in the English class as reported by the participants?

The answers to this question are based on the interviews with the participants and computer class observation during the period of June until September, 2002. They are categorized into two areas: strengths of the Internet activities and problems in learning English in the Internet environments.

4.7 Strengths and Problems of Using the Internet

4.7.1 Strengths

4.7.1.1 Skills in WWW Searches

Specifying key words

All the participants stated that they became more skillful in doing searches. They understood terms vague to them at the start of their work on WWW, such as "general meaning", "specific meaning" and "keywords" in the process of data collection. Once I observed Ek and Kang working together with Google. Kang tried several keywords such

as stem cells, in search for information on how to culture stem cells but he could not find the information he wanted. Ek, then, told Kang of what he thought might be the cause of the problem and of how to try solving it.

Maybe those key words are too general. Why don't you try more specific terms like 'culture of stem cells' or ' process of stem cell cultures'? Let's see what we will get."

After discussion, they helped each other think of the English terms for "process" and "culture".

It is obvious that with the search engine, the participants learned from their direct experience that if they did not specify the scope of their search, the search engine would provide a huge amount of Web sites with the possibility that some contained their targeted information. In such a case, it would take much of their time and energy in the Web selection process.

Scanning Web site introduction

Since the Internet is one of the greatest information sources, most participants needed to be evaluative in order to select Web sites related to the topic of their interest. After spending some time reading some Web sites found through the search engine, the participants learned that not all would be useful. So, they chose to scan introduction of Web sites and then, decided to keep them or not.

4.7.1.2 Awareness of Nature of Texts on WWW Searches

Levels of difficulties

In searching and collecting their data for the group projects, the participants felt texts published on the WWW were of different levels of difficulties. Some Web sites were constructed for general public while others were for specific groups of people. An

example that a participant referred to was when he opened Web sites aimed at professional audience of the field, he found the texts too difficult. He said the content was very much in depth and so were language structures. His background knowledge was not solid or deep enough to gain insights into the gist. Therefore, he searched for more Web sites and decided to select to work with those appropriate for his linguistic capacities and content knowledge.

In addition to searching accessible Web sites, the participants disclosed that they made use of Webs they could read with comprehension as foundation to understand parts of other tougher homepages.

Kang described his way of making senses of what he was reading:

I've to admit that I don't understand the whole text. Some parts are difficult. Fortunately, I could make sense of difficult parts when reading a new online text written to accommodate readers like me (August 28, 2002).

However, in case of the participant, whose English proficiency was low, text complexity discouraged him to explore Web sites.

Criteria on information selection

With the awareness of excessive sources of information on the WWW and of different levels of difficulties, the participants set their criteria in selecting Web sites so that they would be able to deal with the manageable number of information sources, and the appropriate level of text difficulties. They include 1) the authority responsible for the selected Web sites to assure validity of information, 2) accessibility in linguistic and academic aspects, 3) updated information.

In terms of the Web authority, the participants checked whether the Webs of their choices were established by government, university or field specialists. Following are participants' voices on the information sources they used.

According to Po, "*There were so many Web sites about the disease(cancer). I didn't remember the URL's. I focused on who produced the sites. Usually I consumed information from associations such as cancer associations, which are considerably reliable (June 19, 2002).*"

Like Po, Turk was very careful about his data collection. In his words,

I would see if the Web sites were reliable. They must be constructed by those with experience or degrees (their education) in sports, and medicine, or institutes widely accepted. Many Web sites I screened out were those with an aim to advertise their body training programs or supplements for body-building (August 30, 2002).

4.7.1.3 Accessibility to Medical Knowledge & Communication for Self-

Development

The Internet is a collection of medical knowledge and of other disciplines, the access to which is possible via English, and it also hosts discussion forums. The fact inspired many participants to acquire scientific content and the English language in use through reading and writing, simultaneously. Ken stated that after gaining frequent access to the Internet and participated in Web searches, Web construction as well as discussion with friends on medical ethics, he could develop ways of viewing the world which had impacts on his self-development. Ken viewed life of a doctor as someone who needed to educate himself in interdisciplinary areas, in addition to medical fields. He later informed me of how Internet activities and English were meaningful to him.

Each patient comes from different backgrounds. Learning to know about life and different types of sciences with English as a means becomes necessary since it widens how to view things with an open mind. Through the WWW and discussions, I could update myself with current issues and learn about others' opinions. I believe that this would enable me to understand my prospective patients in depth, which would contribute to effective treatment (February 5, 2003).

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The above arguments by Ken may, thus, reflect his vision in his future career as a competent doctor due to two factors in relation with English and the Internet. One might have stemmed out from his connections at the local level while the other at the international level. Locally, his connections with his peers in the Triampaet group, changed him from being self-centered to viewing similarities and differences in others' opinions in order to contemplate his position in relation with others. The vision may also have been brought about by his connections with a larger network, the international level. Through reading articles online and being exposed to arguments on issues raised by experts as seen in his discussion on Right to Death, he could open himself up to a professional circle, listening to what they said and pondering what he was thinking. Such connections later influenced his thinking stage of the writing process---his considerations of audience and authorship etc. previously discussed at the part of the effects of learning English in the Internet environment on his writing development.

However, Kang's experience differed from Ken. He struggled with information search for his group homepage. On the Internet, he said he stumbled over hundred thousands of information sources. In frustration, he said,

The Internet turned to be an ocean where I had to dive into it in search for a grain of information (August 28, 2002).

Kang could not get his desired information but debates on stem cells by George W. Bush. He could collect bits of data from different Web sites. Later he said with happiness that he could get what he wanted…in a book that gave him clear and sufficient information.

Similar to Kang, Turk found himself in an awe of such an overwhelming number of Web sites. Yet, he gradually learned to categorize Webs such as those aiming at advertising their body training programs and selling their products such as supplements, or those aiming at giving instructions to their readers for self-practice. In addition, he realized that Websites at the top of the list provided considerably quality information so there was no need for him to surf endlessly.

Clearly, despite floods of information in the cyberspace, the participants could find ways to move forward. Learning is not about waiting for the teacher to spoon feed what and how to learn. They need to specify their own goals and directions to achieve them.

4.7.1.4 Potentials for Participants to Optimize their Learning/Writing

Another strength of learning/writing in the Internet environment was that the participants could develop their writing through their own approach to Webs presentation such as Medline Plus.

I noticed that some of learners including Po read slides accompanied with short descriptions, animations and the sound of the interactive text in Medline Plus for the first time while he reread the same text but in a different mode, the print mode, for the second time. When asked why Po did that, he explained that the first reading enabled him to approach the text with understanding of difficult terms and content through pictures (such as the term "plaque" with the blue arrow pointing to the yellow part along the artery wall) or animations, and concepts through the side bars as seen on the left of the following screen. He could relate each side bar with the description given on the main screen in order to make sense of an individual topic.

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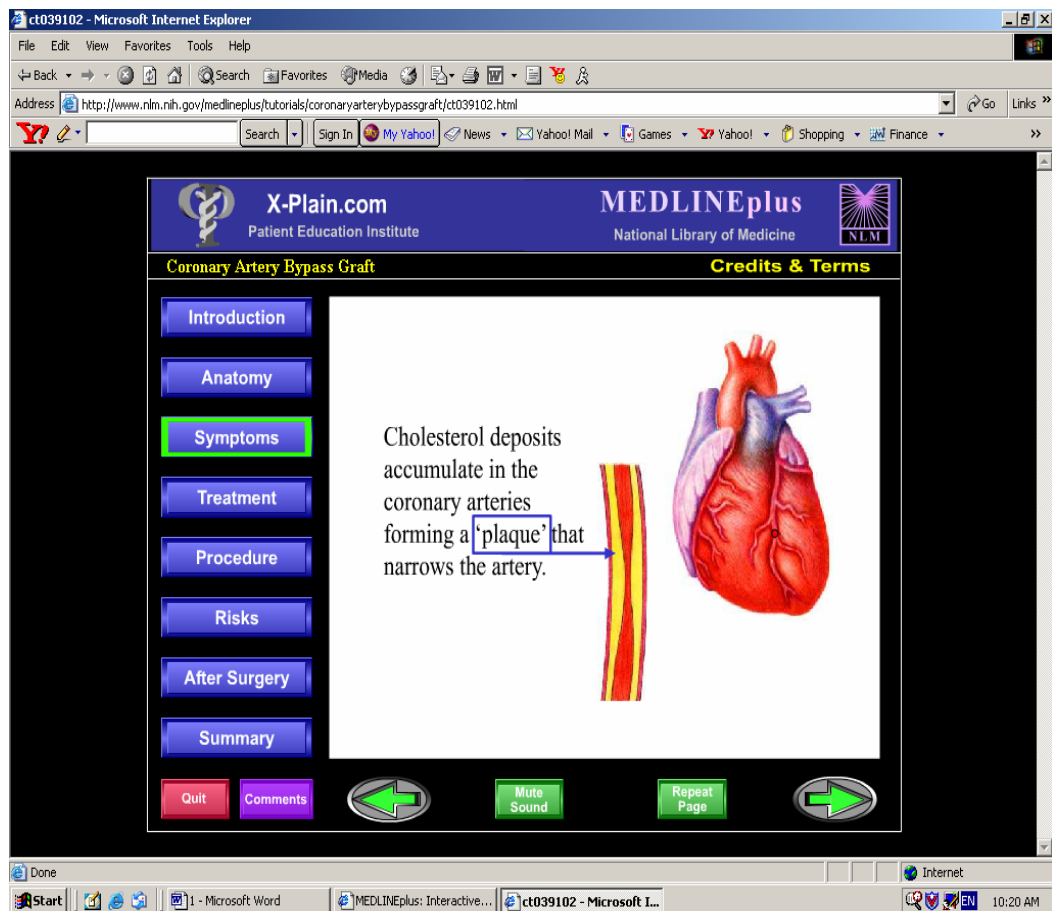
Figure 4.11 Learning to Compose an English Text from MedlinePlus Materials

After the first reading, the learners opened the text in the print module. There they

read the whole text like reading a book. They could observe how description of each

slide was linearly written and how each sub-topic on the side bars were interwoven.

From the second reading, Po said that he could follow the overall content of the text in a

big picture. That means Po employed different reading strategies at the micro- and the

macro-levels which collaboratively led him to the text comprehension and to insights into

writing at both levels. The following was the illustration of the text mode.
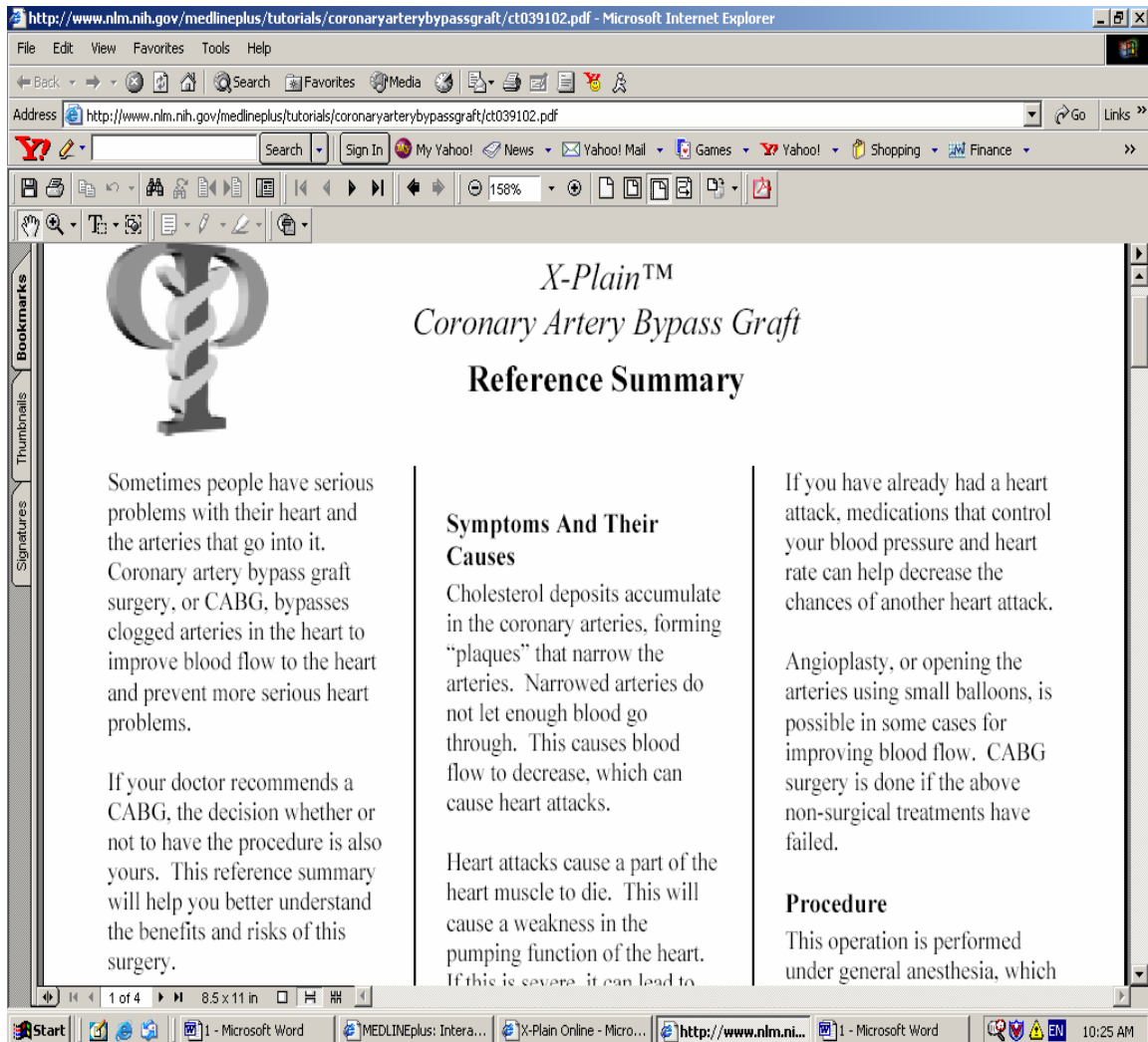
Figure 4.12: Text mode in MedlinePlus materials

The text is divided into three columns, starting from introduction and then, each topic is presented with its main idea and supporting details. In the text mode, pictures are not accompanied with the text. Yet, this mode offers its whole entity.

4.7.1.5 Motivation

Studies on learners' motivation with applications of the Internet in class revealed promising results. Learners were highly motivated when emailing, writing to a listserv, or live chatting was integrated into course activities because they engaged themselves in doing activities, communicated in authentic contexts with their target audience (Warschauer, 1996; Chen, 1998). The current study on the part of the asynchronous mode, namely, the group discussion and Web construction, also reflected similar findings of learners' high motivation. Ken emailed me about his visits at one university computer laboratory.

I would like to tell you that in this week I usually go to the computer center, use the internet , use the printer,and request the continuous paper from the center(all of these are free). So frequently then senior can remember me!! And I know them more. I think this week I can get many things from the internet and my mail from u (July 12, 2002).

The following are the findings of how learning English with the integration of the Internet environment impacted the participants' motivation. I will present factors that motivated the participants in learning and developing their own writing. They include freedom to write their discussions in the Triampaet group, elements of online texts in authentic contexts, content in specific subject-matters and virtues in real life.

 Freedom to write discussions in Triampaet group

Almost all of the participants welcomed posting and reading messages in the group. In this forum, the participants found it liberating to post messages to the

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Triampaet group, the purpose of which was to exchange opinions, information or assistance among the list members. Relaxed after getting familiar with their friends and with the technological functions, the participants could write their opinions on the topics related to medical ethics such as cloning, telling the truth etc. They had choices to discuss one of two cases specified. Most of the participants enjoyed thinking and engaged themselves into the simulation situation while interweaving their experience relevant to the topic in their posts.

One participant reported what he learned from "the field experts in a real situation" when having a training at a hospital. He discussed after reading an article on "patients for practice" to Triampaet that medical students would train to diagnose and treat real patients, a necessary part for medical studies. Yet, the learning and training processes with live patients would be simultaneously beneficial for both patients and medical students under supervision of experienced medical professors at site. He shared his personal experience with his peers on the Triampaet group as follows.

In my opinion, to practice on corpses are not enough. Medical students need to accumulate real experiences by working on real condition. There always has to be a first live patient for an inexperienced doctor but this must be under control and under advised by an experienced specialist. According to my own practicing at A Hospital, I saw a lot of medical students discuss about the disease of the patients under the specialist guidelines to have the right diagnosis (August 16, 2002).

Elements of online texts in authentic contexts

Multimedia input

All of the participants liked to learn from input on the Internet presented in a variety of modes such as texts, pictures, animations, and sound. Such rich input was so powerful in enhancing the participants' comprehension of the text published on the Web sites (Bolter, 1998). Below were some Web pages the participants found helpful.
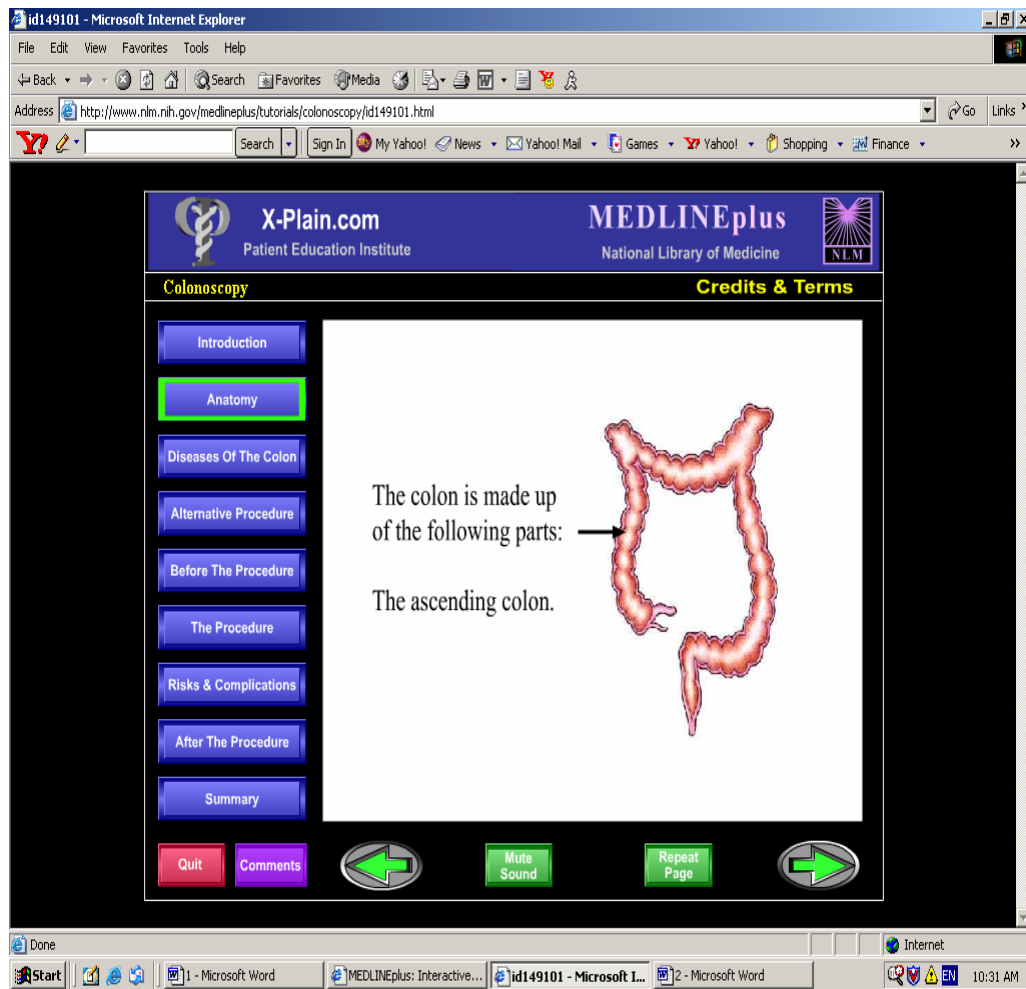
Figure 4.13 Learning Vocabulary from Interactive Mode

They could pick up vocabulary more easily. For example, the text part of

ascending, transverse and descending colons accompanied by its illustration appearing on

the monitor one after another facilitates not only their understanding of the passage but also acquisition of new terms and their retention. In terms of structures, the participants stated that they became aware of linguistic mechanisms and how they were used in different contexts.

At the beginning of the semester, the participants were satisfied with their reading capacity on MedlinePlus. They gained self-confidence in their reading comprehension potentials. Ek, the participant whose English entrance examination score was the lowest and who found the Triampaet group not a comfort zone, revealed his feeling when first reading on MedlinePlus.

I like learning English from the Internet. I feel good because CABG (Coronary Angioplasty Bypass Graft) in Internet is builded to easily understand and use (Email: June 22, 2002).

Meanwhile Ken found it much easy for him to read English texts comprehension-facilitated by different modes of media. He successfully acquired confidence and lowered anxiety. Ken asserted:

I could guess the meaning of vocabulary from the pictures/illustrations accompanying the message as well as the context without having to look up unfamiliar words as often as before. On the one hand, the selected texts such as colonoscopy were not scary. When reading them, I felt secure that I understood what I had read. On the other hand, the texts were of the easy level. (Not challenging!) It' d be better if texts in next sessions would be of a more difficult level since we are probably required to read something more complicated for future study (We should be more prepared.) (July 3, 2002)."

Interactive capacity

An interesting feature of the Internet for learners was its interactive capacity. The participants found interactions on the Internet fascinating. In one class, learners discussed on their health conditions in the next fifteen years. They agreed that their parents' health might have been one indicator that would tell them 1) if they would have

a healthy life; 2) if they had to encounter any disease, or 3) in case they were likely to inherit any disorders, what kind of life style they should lead so that the potential of suffer from such diseases would be lowered. The teacher told the class if they wanted to find out the answers, they could check it out at www.mayoclinic.com. Most of participants visited it and subscribed to it. They were impressed with their family health information they obtained, including advice on what they needed to do in order to maintain their health. Po said,

> *It was helpful to know my current physical conditions and get recommendations from the Web site of how to strengthen my health through diets and exercises, including what I should avoid(June 19, 2002).*

Certainly, the activity involved the participants in many ways

Content of specific subject matter

As earlier identified, all the participants in the research were pre-medical students in their first semester in this university. They shared the same interest in their studies i.e. medicine. This discipline spread its networks on the Internet through different forms such as online journals, magazines, and educational health resources.   Thus, the participants stated that the interdisciplinary learning of English and basic knowledge of health caught their interests.

Ek loved English learning which enabled him to access the subject-matter of his interest. Previously, his English class included general issues, which, to him, were boring.

In addition to what Ek stipulated, many participants stated that learning English through the content of their discipline enhanced them to relate these two disciplines together. They could gain advantages from the English course in understanding more extensively some unclear points in their biology class. At the same time, they could make use of their biology background knowledge in learning it in the target language i.e. they acquired English structures as well as vocabulary more easily.

I heard about cloning, CABG in Thai before. Reading passages about them in English helped me acquire technical terms and ways to write from a vantage point. You know, one question in the biology exam raised an issue of the heart and grafting. I could answer it well on the basis of what I had acquired from an activity on the Internet.

What the participants experienced signified "quick and efficient ways for language learners to acquire discipline-based content and language proficiency (Kasper, 1998)."

Virtues in real life

What is meaningful to learners usually attracts their interest.

After taking the English for Pre-medical Students I, I felt that English was very significant for medical studies (August 5, 2002). The first time reading an online article on health, I didn't feel attracted to it. Later, however, I felt glad and fortunate to have read what would be beneficial in my further study (August 30, 2002).

Several of the participants asserted that after learning about their family health, they connected themselves to the communities of their interests in order to learn more updated information. This personal need arose due to their concerns about their family members and themselves.

Obtaining health information from valid and reliable sources such as www.mayoclinic.com, I feel curious to know more about diabetes, the disease that both my parents have, and that I may inherit in future. I subscribed to newsletters from a diabetes association based in the US. I regularly get interesting information via email. This is very useful (September, 2002).

Although the participants were happy with the integration of the Internet into English class, they also reported times when they felt less motivated to work with the Internet. This involved the participants' time constraint, size and appearance of the input and difficulties in linguistic elements. The issues will be addressed and discussed in the part of weak points of the English class with integration of the Internet.

4.7.2 Problems of Using the Internet

To some extent, the participants perceived that the English class in the Internet-integrated environment had negative impacts too. They argued that Internet activities were time-consuming, and technology-dependent.

4.7.2.1 Time-consuming

The pre-medical program was a time-demanding program. Learners had a tight schedule as the following.

	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17
Mon		Eng	Psycho	Chem	Chem		Bio lab	Physics	Physics
Tue	Physics	Physics	Calculus	Calculus		Bio lab	Bio lab	Bio lab	
Wed		Eng	Psycho	Chem		Che lab	Che lab	Che lab	
Thu	Physics	Physics	Chem						
Fri		Eng	Psycho	Chem	Chem		Bio		

Table 4.4: Pre-medical program weekly schedule

At the start of the semester, the participants did not have lots of workload and assignments from other courses, so they could spend long time with English class activities on the Internet after class at university computer laboratories and during weekends at home, or at cyber cafes. The participants contended that with time, they could write long texts. However, as the mid-term and the final examinations were approaching, they had to budget their time to study other courses, too. The result of the time limitation inhibited their writing quantity.

Like others, Turk said,

When I have time, I don't have to worry that I've something else waiting to be done. But these days, I have to budget my time carefully for assignments of all the courses taken this quarter so that I could have all done on time (August 30, 2002).

Some participants stated that their motivation for English writing turned low after the mid-term examination. The underlying reason was that the participants had problems in learning other courses of their field such as biology or chemistry laboratories. Thus, they had to be more cautious with those courses rather than English.

Our labs contained tons of information I needed to know. That reduced my best efforts for the English class I had intended to make at the start of the quarter. The score for English in the mid-term exam assured me that I would pass the course finally but for the other courses, I was not sure of (August 28, 2002).

Difficulties in connecting to the server

All except Ken found dial-up to the university server sometimes was very difficult. They had to spend a long time, sometimes an hour in order to get connected. The reason was because of a large number of Internet users, university students and personnel during the peak time from 8:00-12:00 p.m. They usually accessed the Internet

after midnight or early in the morning around 4:00 a.m. For Ken, wasted log-in time was not a problem. This is because, generally, cyber cafes subscribed to high-tech Internet service providers.

Slow speed of information retrieval

Some participants complained about the slow speed when retrieving information, especially from the Web sites with lots of pictures, or sounds. Turk said that connecting to the Internet from home was slower than doing it at the university. The causes of slowness could be the low capacity of the participants' modem, the excessive number of Internet users, or the size of the data to be downloaded, the more, the slower. They said that the slow speed problem could be relieved during the off-peak period.

Size and appearance of input

Some participants projected their voices concerning the size of input and illustrations retrieved from a Web site when reading on the computer monitor. Long online texts tended to make the participants reluctant to read. *"Long texts are intimidating and I'm not used to reading them,"* Ek said. He discovered that the content of the text was challenging and it contained many new vocabulary. He couldn't understand it much.

> *The length of text made me overwhelmed. I tried to change my perceptions of how hard English and English texts were by telling myself the content of the text was biology and its related areas, the subject I was very fascinated and decided to take it a part of my life. After reading the long text for a while, I gave up. I had faced lots of problems (June, 26, 2002).*

Po made an interesting remark about reading a lengthy text on the monitor that it

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tired the eyes. He said he noticed that his friends and he would print out long online text

to read rather than reading it online. It was much easier to read on the paper because he

could mark on any parts of the texts or make notes on them for further use.

In addition to long texts, another factor which could lower the participants'

motivation was texts with no illustrations. They contended that if the text was just the

text without any pictures or tables or animations, they did not find it intriguing. Po

contended, "I would feel very exhausted reading a text like that online (August 28,

2002)."

Level of linguistic difficulties

All of the participants experienced linguistic difficulties while selecting

information for their Web site construction. This is because some Web sites were created

for experts in their particular fields. The complexity of language and technical terms, in

addition to statistics, were factors for them to consider whether to tackle with the

linguistic problems or not.

4.7.2.2 Technology-dependent

Problems with hackers

Turk's group project on Body Building was constructed on a free Web presence

provider he found when searching for free site hosting. Right after three days of his

uploading the group project files onto the site, gradual changes of his group work

appeared.   One page of their home page disappeared and replaced by an advertisement of

Porn Web site. Later more pages disappeared and new unknown and obscene pages were

filled in. Within two weeks, his group project homepage was completely wiped out and redirected to "porn sites". The group was shocked and had no idea how such things had happened.

> *We chose this free space Web provider. We uploaded all the files we had, none of which was porn advertisement or porn pages. After uploading them, my friends and I checked and rechecked each page of our homepage many times till we were sure that our classmates and maybe other visitors would see our Web site the way we had designed. Everything looked great by then. I'm so sorry that this happened (September 4, 2002).*

Hackers could access the Web site and remove it very easily. Computer experts suggested that students should keep their homepages in the space provided by the university. It was a safe site with tight security and regular monitoring.

Denial to gain access

Some participants sometimes had a problem with their access to Yahoo and the Triampaet group. Ken had the problem of denial to gain access to the Triampaet group many times.   He said that he could not sign in. For the first time, despite his certainty that he input the correct password, the response was that it was the wrong password. So he had to apply for a new account from Yahoo and subscribed to the Triampaet group. The second and third times were the problem with the network system that all of the participants shared in common. One participant voiced his concerns via his email to me.

> *I cannot go to my inbox @ yahoo mail. So I cant find the SLEEP (an online article), the example of mid term examination, and dictation. I think the server is very very busy (July 18, 2002).*

Late July and late August, there were two technical problems: the Internet worms and the breakdown of the cable, which slowed down access to international networks.

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Since the Triampaet group originated from YahooGroups!, the connection from Thailand

to the group was made internationally. Due to the slowness, data could not be retrieved

within the download time allowance.

Excessive number of messages in their mailboxes

All complained that their Yahoo mailboxes were filled up with posts from the

class very quickly. The participants preferred opening them to entering the Triampaet

group due to its convenience to check messages posted from their peers or other circles of

friends such as those from high school. With too many emails in their mailboxes, they

said that they sometimes felt overwhelmed with floods of messages. Kang admitted that

soon after seeing them, he deleted them all suddenly and would go to the Triampaet

group to read and post messages.

Delayed or lost posting

Some participants reported the problems of delayed or lost posting. They

submitted their messages to the Triampaet group but when they checked if their messages

were posted for everyone to read, they could not find them until a couple of days later.

For Po, immediately after pressing the Send button, the text in the body of the message

just disappeared, the result of which was a blank message submitted to the group.   For

Kang, some messages simply disappeared. The cause of the delayed or lost posting was

still unknown. The following were emails of Kang and Po who suffered the problem.

Date: Tue, 27 Aug 2002 08:59:04 -0700 (PDT)
From: "Kang" <bioskang@yahoo.com> |
Subject: my text lost from group
To: mpornsiri2002@yahoo.com
Hello prof. ---
My text about my opinion in confidentiality is not found in the group. I sent it on
20/8/2002 (last wednesday). I don't know why it lost. How should I do?
Plz help me

Below is an excerpt of Po's message, informing his list group members that he

encountered a problem of posting it to the Triampaet group and ,thus, he resubmitted it.

From: Vasikasin vasin <vasikasin@yahoo.com>
Date: Wed Aug 21, 2002 10:59am
Subject: /group/triampaet/message/176?expand=1
Hi everyone,
*   I have received a message from Yahoo! telling me that it has some errors. This*
following is my message….

To avoid such problems, university computer experts recommended that

discussions like this should be constructed on the local network because once there rose

any problems, it would be possible to trace their causes and made corrections right away.

<u>Summary</u>

This section addresses the participants' perceptions of the strengths and

weaknesses of using the Internet in the English for Pre-medical students class. In terms

of strengths, it was found that the Internet use enhanced their search, information

scanning and text-evaluation skills. They could access information sources useful for

their medical study and future career. What was noteworthy is that the Internet activities

boosted their motivation to use English and develop their competence in writing.

Meanwhile, to accomplish Internet activities, there were some difficulties in much time

consumption in dialing-up to get connected with the university server through the

modem, downloading information from their home computers. Students also reported

difficulties of texts which were complicatedly written. Aside, other technical problems

included hackers, denial to gain access to the discussion group, lost or delayed posting,

and an excessive number of emails in their mailboxes.

CHAPTER 5

SUMMARY OF FINDINGS, PEDAGOGICAL IMPLICATIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

5.1 Summary of Findings

The current study was conducted to describe perceptions of five participants of their learning/writing in the class English for Pre-Medical Students I and examine their writing development in terms of syntactic complexity. It employed the mixed method design: the qualitative framework to explore the students' perceptions and the quantitative framework to analyze their writings collected at the beginning and the end of the semester.

The participants of the study were five pre-medical students of a university. Over a period of a 16-week semester, they read five interactive modules of the Medline Plus, four articles from online news organizations, and six ethical texts, plus two learners' initiated topics for discussion. The participants wrote short texts based on language foci of each chapter on paper and they posted emails to the Triampaet group for discussion

topics related to the medical discipline such as ethical issues. Data from class observation, interviews, and the participants' writing samples were collected and analyzed qualitatively through coding, and quantitatively through T-unit analysis.

Research Question 1

What are the participants' perceptions of English learning and writing, and of the Internet at the pre-college level?

Before taking the English for Pre-Medical Students I class, three participants stated that they liked learning English for its advantages for their studies and future career. All of them occasionally exposed themselves to environments where English was used authentically beyond their classroom. The other participants, on the other hand, did not like learning English despite their 15 years of studying it. The results from the data show that they were aware of the significance of English. They lacked interest in it, however, due to the fact that their English classrooms mainly focused on grammar, which was dry and not related to their real life activities. They did not have motivation to learn the language. As Waschauer (1996) found, learning efficacy cannot be achieved without learners' motivation to guide them to engage themselves in learning.

In terms of their classroom environment, the pre-medical students stated that they learned English with the teacher as the authority who instructed classes based on rigid syllabi using a single course textbook. In school, the research participants were assigned the role of novices and were expected to acquire English grammatical features. Learning practices were constructed without regard to students' needs, interests or areas of study (Wright, 2003). Such a learning environment puts students into the same mould, disregarding learners' centeredness, in the hope that they would become well-finished

mass-products. Freire (1970) explained that this type of learning setting is one in which "knowledge is a gift bestowed by those considering themselves knowledgeable upon those whom they consider to know nothing (p. 72)", instead of "communicating, the teacher issue communiqués and makes deposits which the students patiently receive, memorize, and repeat" which "minimize or annul the students' creative power and to stimulate their credulity (p. 73)." Studies (Warschauer, 1999; Kramch, A'Ness & Lam, 2000; Chen, 1998) show that from participants' perspectives, such a classroom environment could not promote optimum outcome from learners' parts.

With a closer look at the teacher and learners in the traditional learning setting, another shortcoming surfaced. Both parties played static roles. The former was regarded as the sole expert while the latter were viewed as novices. In most EFL classes such as those in Thailand, where over 40 learners were packed in one class, it is overwhelming for the teacher to intellectually nurture each and every of them efficiently. Sources of knowledge, thus, should multiply, instead of limiting them to the teacher and a single course textbook.

On the other hand, students should not completely take the role of recipients. They should be encouraged to participate actively in learning processes. At the same time, they should share their expertise with other classmates in collaborative learning which contributes to knowledge co-construction. Findings of the study suggest both the teacher's and learners' multiple roles. The traditional classroom expert can play a role of a facilitator, consultant, or catalyst in order to optimize learners' learning by doing. Meanwhile, traditional novices may take roles of learners, collaborators, writers, proofreaders or experts so that they can appreciate their gains through self-engagement.

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In support of autonomous and collaborative learning, multiple sources of knowledge should be available and accessible. In EFL settings, there are constraints of English language acquisition. First, learners lack an opportunity to use English in everyday life because EFL environments are the milieu where the fist language, Thai in the current research, is mostly used. English is the language for businesses in international or import-export companies. Though it is also the language in education, a compulsory course in Thai schools, English learning is limited within the classroom with no connections with the real dynamic world in English-speaking environments. This contrasts with the nature of language which, if not a dead one like Latin, is living, interactive and multi-functional. Once learning it is defined within one's self, one text, one teacher in one setting, learning loses its meaning due to a lack of dynamics. Second, learning materials for an English course in EFL contexts involve a single course textbook. Limitations of a single information source may include obsolete readings as Ken complained, insufficient explanation or illustrations of foci under study, and rigid/fixed levels of linguistic difficulties to be learned by classes of mixed English proficiencies. These constraints easily distract and detach learners from autonomous and collaborative learning.

Regarding their perceptions of the Internet, all of the participants liked it. The Internet provided them with updated information of a wide variety such as entertainment, online games, and online discussions. These activities connote (a) pleasure for young people to follow news or information that catch their interest, (b) challenges to their capacities of dealing with problem-shooting which does require critical thinking, and (c)needs to co-construct knowledge with others through communication exchanges.

Evidently, activities as such can cast spells on learners to spend much of their time in doing them. As a matter of fact, language plays a key role as the medium used to implement the activities in the digital environments. In this study, most activities they did at the pre-university level in the cyberspace employed the Thai language as a medium for communication.

The current research suggested that problems in traditional target language classes, such as teacher-centeredness, including limited and non-updated sources of learning materials, could be mitigated with employment of Internet activities. The learners were engaged with learning English by using it dynamically, interactively and functionally in interacting with digital texts or with peers' messages through online-group discussions, Web searches and Web readings, as well as Web construction.

The research results revealed the blurring picture of the teacher and the emerging position of the learners as a learning center in the new learning environment. Additionally, they showed the learners' move in search for learning materials beyond what was provided in class. Peers' posts, online texts contributed by field experts, experience in surfing the Internet, and group writing projects could motivate the learners to use English, in order to develop their writing complexity and to situate themselves in the learning contexts of technologies that enhanced their formation of authorship through their experience as Web audience.

Attempts in initiating activities in the milieu for pleasure, challenges and needs, and in applying them into any foreign language classes, thus, are worth-considering. The activities can stimulate learners' motivation and self-engagement in learning their target language. Nevertheless, cautions should be made. In the study, the learners voiced some

concerns about the use of the Internet in terms of virus, hackers, and reliability of information sources. Two of the concerns appeared during the course (virus attack against some students' computers) and at the end of the course (a group of learners' homepage being hacked and finally replaced by a pornography Website). More discussions on these findings will be further discussed later.

Research Question 2

From learners' perspectives, which of the contexts/environment enhance learners' writing development---Triampaet online discussion group, Webpage reading, or homepage construction? Under what conditions do they perceive they can compose well?

Most participants reported that Internet activities altogether enhanced their English writing development. They could remember meanings and use new terms found in good sample texts on the World Wide Web in their writings. The less effort in picking up unfamiliar vocabulary resulted from a variety of choices of text of their interest, English proficiency levels, specific scientific contexts where those terms were used, frequency in encountering same terms in different texts of same topics which the students needed to read for information to construct their Web sites, and multi-media environments where pictures, animation, interactive or other meaningful eye-catching (not the 'eye candy' (Rea and White, 1999, 427) features), were employed.

Additional to vocabulary, the research participants also perceived that they could write with more sophisticated English structures as taught in class and exposed to online authentic and contextualized texts. Opportunities to write in the Internet environment and from the students' intention to interact with real audience enhanced them to engage

themselves in real communication, unlike traditional classroom activities where their assignments focused on grammar rules rather than pragmatic uses of the English language.

Their searches for information of group projects expanded their vocabulary and structures through exposure to those language applications in different online texts of the same scope of topics. Some participants found that they could recall, to a greater extent, vocabulary and structures to convey their messages automatically. The automatic process was also facilitated by another aspect of language learning through online texts.

According to the students' report, other Internet resources such as MedlinePlus interactive presentation with key concepts arranged in the forms of buttons on the right of the screen and description of those concepts located at the body part could strengthen the participants' understanding of good writings and their major components: the main idea, its supporting details and text organization. At the same time, they could expand their vocabulary range, mostly from illustrations accompanying texts. The automatic process made their writing less painful and more satisfactory.

Findings of studies (Prappal, 2000; Kasper 1998; Chun & Plass, 2000; Stepp-Greany, 2002; Warschauer, Schetzer, Heidi & Christine, 2000, Bloch, in print) that revealed the World Wide Web as good information sources for language learners, in fact, are not new. Yet, they were still unclear about what and how it enriches learners' composition abilities. This study provides a picture through lenses of the participants to bridge the gap.

It is also interesting to note that by opening up their classroom and getting to know the world out there by means of the Internet enables learners to be aware of

relationships between English classes and how English is used in real life. Learning and communicating in English become more meaningful to them and in turn, raise their motivation to get more involved with it. They are likely to develop positive attitudes towards English learning through using it in authentic contexts, unlike learning grammatical features and trying to complete assignments not related to authentic uses of English, their needs and interests.

Not only did online reading enable the students to be better equipped with essential linguistic and rhetorical elements to develop the participants' English writing, but it also stimulated them to evaluate Web sites if they were reliable in terms of their content, authority, and appropriateness to be their information sources for group Web construction. Unlike other studies (Tannen, 1998; Slaouti, 2002) which projected concerns about students' choices of information sources, this study provided a new lens of looking at students' evaluative judgment of Web reliability. Experience in searching Web sites for their research and encounters with many sites which aimed at advertising their products or other commercial purposes taught them to be selective. The evaluation led them to weigh strengths and weaknesses of selected Web sites so that they could elicit the best and eliminate the weak points when constructing their own. In addition, they became skillful in specifying terms or key words that would narrow down data to be retrieved through the use of search engines.

The participants felt the environment of the group project a formal platform where they could present what they were interested in and researched for in English. The cyberspace allowed them to reach audience larger than the teacher and their classmates, and push their boundaries within the classroom to where any Web site navigators would

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be able to reach. The learners were more conscious of what and how to write with responsibilities for their wider audience. In this sense, the participants referred to accuracy, clarity of information, and English language use. They became cautious with their Web design that would ease their audience's understandings.

With experience in surfing Web sites for information, they tried to avoid problems they encountered in those homepages when searching for information, for example, problems of language difficulties, and overwhelming quantity of text on one page. In writing for their Web sites, they used linguistic elements based on two criteria, those they had acquired and used in scientific texts, and those they found audience-friendly. Po's group and Turk's group also attempted to produce each page to fit the screen so that it would be easy for their readers.

Last but not least, the Triampaet discussion group also took parts in the participants' writing development. It had affective influence on learners to find ways to communicate in English. The factors that stimulated the participants to express their ideas into words, included the Triampaet group characteristics of (a) being a relaxing atmosphere among the circle of classmates of the same field of study to do discussions openly, (b) engaging thought-provoking topics of their future professions, and (c)encouraging the research participants to take risks in generating their ideas into English messages at their own pace as well as time. The participants contended that they could select what linguistic elements and writing techniques to learn from their peers' texts accessible among all group members, the milieu hardly found in traditional classroom. The Triampaet group became a source of knowledge where they could revisit favorite messages considered useful for their writing improvement when they had time.

The features like those of the Triampaet group aforementioned could enhance learners to feel comfortable to write, review, revise, archive, re-evaluate, submit and receive messages at their convenience (Warschauer, 1997).

In terms of empowerment, similar to previous studies (Belcher, 1999; Warschauer, 1999), the students who did not interact face-to-face in class could communicate enthusiastically in English writing in the Triampaet group. In this study, four of the participants showed that they were empowered to make their voices heard among others. They could position themselves in various roles of learners, users, experts, writers, readers etc. It is remarkable to see that they learned by doing and could adjust their writing strategies to suit purposes. The students could interact with their peers without being interrupted or being influenced by one another. They reported that the online-group encouraged them to be an integral part with their writing because they could express who they were and how they viewed the world freely with fewer peer or time pressures.

The findings of what conditions the participants found they could compose well are reflected in the findings above. Their productivity would thrive (a) when they had information to write, which could be through WWW research; (b) when they had been exposed to authentic texts purposefully written for English speakers, and had acquired sufficient vocabulary and English structures; (c) when they felt relaxed and positive with their work; (d) when they gained confidence in being experts of what they were writing, and when what they were writing emerged from their interests. These findings, although not totally new, help confirm the existing knowledge (Costello, 2000; Wiegel, 2002;

Warschauer, 1996; Belcher, 1996; Lam, 2000; Kramch, A'Ness & Lam, 2000; Soler, 2002, Kasper, 1998) and may assure ESL/EFL/ESP teachers who are interested in using the Internet technologies in their classes of potential directions to fruitful productivity.

However, despite virtues of the Internet, its use in class could cause discomfort to learners to some degrees. One participant, Ek, whose perception of his English was not completely positive did not make many attempts to do the Internet activities. The online text length and the threshold level of English proficiency may be the main factors that prohibited him from accessing English texts. In online-discussion, it might be anxiety that led him to think that his deficient English might cause misunderstandings or disagreement with his interlocutors in the Triampaet group. He felt reluctant to participate in discussions enthusiastically if the ones he interacted with were not his friends. Those reasons put together made him refrain from being a part of writing activities for his group Web project, but compensate it with being in charge of constructing the group Web site.

During Web site construction, the participants had been through difficult times of Web searches, information selection, and writing processes. They made lots of complaints but gradually learned to fix those problems incurred. At the end of the semester, all of them stated that they were very proud of their products and felt glad that they could overcome the discouraging feelings they had experienced. They gained valuable knowledge and electronic literacy out of the pains they had borne.

This research applied the conceptual electronic literacy framework proposed by Shetzer and Warschauer (2000) in three aspects: communication, research and

construction. The authors suggested possibilities of technologies for classroom

applications; yet, they did not relate how each aspect interact with the others. This study

interweaved them as illustrated below.
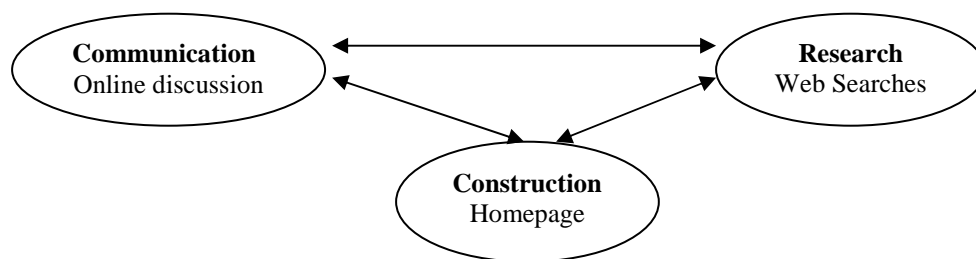
Figure 5.1: Conceptual literary framework

Within this framework, the goals are to enable language learners to learn the

target language by using it for realistic purposes. Learners are required to join the class

online discussion group, construct a Web page and do Web searches and Web reading.

At the start, the teacher may need to give formal instructions, and introduce to class,

selected Web sites that contain necessary linguistic features or expressions commonly

found in the target language texts.

After being prepared, they may be ready to search for online information required---medical sciences and related areas in the research case through search engines. With their existing language proficiency, they interact with selected readings to collect information for their Web page construction. While reading, they may need to obtain more information in breadth or in depth or to check some arbitrary points they have encountered in their previous readings through additional research. Exposure to readings of a specific topic likely enables learners to develop their language proficiency, at least, vocabulary or structures circularly found.

However, without putting new knowledge in use, it is difficult to retain it. Therefore, learning the target language by writing is essential. During the stage of searching and selecting information for Web construction, it is recommended that learners interact with their peers via the online discussion group to request for help, report their group work progress, or recommend interesting Web sites for other groups to consider building more content in their Web construction project. In addition to assigning the online discussion group as a setting for the class to voice their concerns, render help or make requests, it is also appropriate to be a forum for discussions over topics of class interest. The teacher may consider the discipline of learners and initiate topics of the field or ask learners to vote for topics of their preferences such as medical ethics for pre-medical students.

In order to implement the activities, learners are challenged to think critically how to write well. For example, in Web site construction, they have many decisions to make: what should be the scope of the Web project, which information is relevant, how

information should be organized, how to facilitate audience's access etc. On the other hand, online discussion enables learners to be aware of their writing problems such as a lack of vocabulary, grammatical structures, writing complex ideas or translation. They can compare their messages with peers' and see how ideas difficult for them to express are composed by others. This is a learning community where learners could learn about their own weak points and make efforts to develop their communication competence from others.

Research Question 3

Do the participants' perceptions of English learning in the Internet-Integrated environment have impacts on their writing processes and their writing products? If yes, in what ways? If not, why?

The results show that all the participants perceived that English learning through communication, research and construction in the Internet-integrated environment was beneficial for their English learning/writing. In terms of the process of writing, the pre-medical students developed their authorship. Positioning themselves as authors, they paid attention to the purposes of their writing and their readers so they attempted to make outlines, write accordingly, read, reread, revise and edit their writings, some of which included online resources such as pictures, animations or experts' opinions for effective communication with their audience

In terms of syntactic development and vocabulary expansion, qualitatively, all participants stated that they could reduce their grammatical errors, increase linguistic complexity, and apply newly acquired vocabulary to their writing. The findings are congruent with previous studies (Sullivan & Pratt, 1996; Gonzalez-Bueno, 1998; St John

& Cash, 1995; Sotillo, 1999; Regan & Zuern, 2000). Those who had complained, at the beginning of the semester, that they had a problem of vocabulary limitation e.g. Po, Ken and Kang, reported at the end of the semester that Internet activities---posting messages to the Triampaet group discussions, Web searches or Web site construction facilitated their acquisition of new terms, especially technical ones. Their exposures to online texts of their interests for project construction raised chances for them to see similar groups of vocabulary over and over again.

During the writing stage, four of the participants believed that they could compose messages in English more fluently. They spent less time in the thinking and writing processes due to increasing language competence and frequency in writing messages to the Triampaet group and their group project. Another impact on their writing was changes of foci from forms to content and from accuracy to passion. The changes took place in the online discussion setting and expanded from rather "casual" to "formal" writing seen on their Websites. The participants contended that they felt relaxed to communicate, and willing to take risks in using new vocabulary or structures. Though they focused on the body of the message rather than grammatical forms. The more they wrote, the more confident the students became in being writers in the English language.

In addition to the qualitative findings of the pre-medical group's perceptions of their writing development, the quantitative findings also endorsed what the students felt. The lengths of T-units, percentage of their use of multi-clausal sentences and accuracy show that they made progress in English writing.

It is remarkable that the comparison between the percentage of increasing uses of complex sentence patterns and the errors which the participants made shows that over a semester of 16 weeks, the learners could write longer sentences with more syntactic complexity. However, the development of grammatical accuracy seemed minimal. In this respect, explanation could be made through two possibilities. First, the materials used for comparison were the learners' posts to the Triampaet group, which became a casual setting for interactions. The learners tended to focus on messages rather than grammatical features and take more risks in using new terms and structures. Second, since their pieces of writing became longer and more sophisticated, learners were prone to make more local errors, many of which occurred repetitively such as present subject-verb agreement. Yet, the study revealed the learners' development in accuracy despite its being minimal.

Taking the facts into account, it can be seen that there is tendency of writing development. The participants made progress in terms of language use at the macro-level i.e. the language level sufficient for communication. It is also important that they need to improve the use at the micro-level even though those errors in their texts did not interfere with communication breakdown.

In terms of the content focus, although a number of advocates of combining language learning with learners' discipline grow steadily, few studies have investigated the potentials of the World Wide Web in content-based classes of English. Among those few, it was found that WWW was an effective enhancer of interdisciplinary studies, for example, between Spanish/French languages and their cultures as seen in Osuna and Meskill (1998); Furstenburgh, Levet, English, and Maillet (2001) respectively, literature

and English (Meskill & Ranglova, 2000), and business and English in Brett (2000). Even more barely seen are interdisciplinary studies between biological and medical science and English in the WWW environment, especially in EFL contexts. This study pushes the boundaries of the existing literature of the field of second/foreign language acquisition with the focus on English writing since it engaged the participants from a university pre-medical program who took an English course for Pre-Medical Students I with integration of the Internet in the development process of English learning/writing.

This research confirms findings of previous studies that combination of language learning into learners' disciplines in the Internet milieu can promote their motivation (Upton, 2001; Feak & Zuern, 2000; dos Santos, 2002; Soler, 2002; Kasper, 1998). Learners pay meticulous attention to learn English in order to use it as a key to unlock their content-based knowledge. Their awareness of significance of English and fast-growing knowledge of the medical field that they can keep pace with through the Internet can potentially propel them towards self-development both in their studies and their profession. This is also the current trend as reported statistically. College students or professionals such as doctors access the Internet frequently, at least three times a week to keep pace with rapidly developing scientific progress, new research and discoveries worldwide.

Another remarkable finding of the current study regarding uses of specific content in English classes is that there is likelihood that learners could use acquired knowledge of their disciplines to facilitate acquisition of English through its authentic use of online English texts. In either directions or both, it can be seen that learners can learn on the bases of their background knowledge in English and/or their discipline area, which could

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co-constructively be laid as formation of new knowledge in learners. The findings of this study also endorse the idea that within a course of time, learners likely shift their focus from the language to the content i.e. changing roles from language learners to information managers.

When situated among literature of the field, the study is similar to the one by Kramch et al. (2000) in its applications of Internet technologies that Almon, the Chinese immigrant in California and the five research participants used to communicate with those interested in J-pop music and sciences by means of personal Website and asynchronous mode of communication. Both studies shared the same view that the Internet activities based on their interests could lead them to develop confidence in the target language use, set their own goals for communication, gain fluency, establish authorship, and make progress in writing. The findings of the studies also portray potentials that English learners, no matter what the proficiency level is and where they are, can become successful English users, experts of their fields and competent communicators with appropriate uses of the Internet and its resources.

It is logical to make a claim that the technologies establish equality between digital ESL and EFL environments. That is, learners from ESL setting like Almon or the five research participants from EFL contexts can gain access to as many resources as they could reach, which are far beyond any physical boundaries. The EFL context, once deprived of resources, authentic, contextual and current learning materials, opportunities for learners to interact with English speaking people, could be transformed to a new

setting where its inhabitants can share world resources with others at their own will and become empowered to construct and proliferate their knowledge individually as well as collaboratively.

Despite the commonalities discussed above, the current study is unique in its research context. Unlike the study of Kramch et al., this study was conducted in a formal educational classroom for pre-medical students. It suggests that the Internet can bridge the classroom setting and the real world. Their interconnections can establish learners' awareness of significance and relevance of course materials to authentic language use. The establishment promotes learners' motivation to develop their writing by using it to construct multi-functional texts in meaningful and purposeful ways.

This study further scrutinized what Kramch et al. (2000) examined in two distinctive ways. First, while the study of Kramch et al. focused on a single research participant, this research investigated five. The qualitative design with more participants recruited can provide to literature more new knowledge such as factors conducive to lengthy text construction. It is in a better position to offer substantial evidence through confirmation of themes recurring from each participant's data sets. Second, Kramch et al (2000) claimed that Almon's writing quickly improved through his Web page writing and correspondence with his Web visitors and pen-pals; yet, they did not provide evidence to support their claim. This study, on the other hand, investigated the participants' compositions and analyzed them with the T-unit in addition to examination of qualitative data. As illustrated earlier, the information obtained quantitatively endorsed the learners' perspectives of their writing development and substantiated the existing knowledge.

What are the strengths and/or constraints of the use of the Internet in the English class as reported by the participants?

Like previous studies, the strengths of the use of the Internet in the English class based on students' perspectives were motivation, development of their skills in WWW searches, and a raise of awareness of characteristics of texts. They felt excited when entering the Internet and finding medical Web sites. They were energetic to know that they had choices to study topics of their interest. A learner who had problems with learning the anatomy of frogs in a biology class turned to the Internet and found a Web site that gave precise and concise English description of frog and each of its part with visual illustrations that facilitated his understandings. After retrieving the information, he posted his findings to the Triampaet group to share them with all the group members.

Clearly, such occurrences could activate learners' realization of significance of English, Biology and technology as great company that can be collaboratively used to strengthen their intellectual development at fast speed. The evidence also shows that this company of these three disciplines potentially encourages self-development of pre-medical learners to become well-rounded personnel of their medical profession and, even larger than that, it could enhance and propel community development through contributions from those who know more/faster to those who know less/later, among learners themselves, via the Internet. Collaborative learning with interdisciplinary studies will, thus, be promising for success in education.

Belcher (2002) questioned how electronic literacy helped students think of themselves as authors. 'Authors' (142) can be referred to as students who construct Web sites, and those read non-linear electronic texts and are able to co-author them by

selecting their own directions of exploring texts through links. Web pages constructors might feel deprived of power because they lose their power to guide audience to their texts created digitally in a non-linear and interactive fashion as seen in the study of Kramch et al. (2000). This allows readers to become writers (Lanham, 1993) or the hypertext authors' adversaries in the sense that they have power to recreate the text in unexpected directions (Bolter, 1991).

This study found otherwise. In creating their Web pages, the participants perceived significance of audience and tried to create reader-friendly texts. Po stated clearly that he and his group members incorporated internal and external links into texts so that readers could go directly to the points of their needs or leave his group's homepage for more information elsewhere. They intentionally offered alternatives to readers to select what and how to read their texts which would serve their needs and interests most. It is not exaggerating to say that these writers felt powerful to be able to empower readers to co-construct multiple versions of their texts in their own meaningful ways.

Such an idea, Po stated, originated from his group experience as Web readers. When he did not understand any unclear part of an online text, he would himself restructure the current text by jumping to other parts of the text or other Websites that would provide him with clarification. As much as he enjoyed co-authoring the text he was reading, he did not mind if his readers would do the same.

Aside from providing links for readers to co-construct knowledge with his group, Po was also concerned about readability of text on each page seen on the computer screen. From his experience that it was difficult to read the whole entity of texts due to

screen size (Bloch & Brutt-Griffler, 2001), as an author, he designed his presentation to fit the screen with component buttons on the left column of the page for readers to select them at their own will. This made it easy for readers to digest information.

Despite virtues of the Internet aforementioned, weaknesses in applications of Internet activities exist. As Warschauer remarked in many of his studies, the complexity of technologies should not be neglected. Like in this study, students argued that the Internet had its problems too even though they occasionally occurred. Problems found in the research class as reported by the participants were those with hackers, denial to gain access, excessive number of messages in their mailboxes and delayed or lost posting when interacting with peers on the Internet. Such problems for the participants were annoying, frustrating and time-consuming. The one with hackers can be minimized by avoiding services of Web sites which offer free space for homepage construction and by using the available space belonging to educational institutes which generously offer to their students. In order to avoid the excessive number of emails from discussion groups, a Webboard may be a possible solution because it can be served as a site to exchange opinions. For message loss and access denials, unfortunately clear explanations are not conclusive and thus, ways to prevent the loss or to gain access at all times cannot be reached. However, to prevent such occurrences, applications of the local network in place of the international one such as Yahoo are worth taken into account.

5.2 Pedagogical Implications

The current study provides several significant implications for English learning/writing in the Internet environment in the EFL context where English for pre-medical students is in focus.

The findings regarding students' perceptions of English learning/writing in the Internet environment suggest that teachers of second/foreign languages should consider introducing the Internet into their classes. First of all, Internet technologies have been playing active roles in new generations' lives. The increasing number of students uses the Internet for online games, communication with friends, entertainment, research on issues of their interests or discussions on Webboard. This is because it is the world biggest information database and a variety of communication devices where Internet users are empowered to access countless information sources, or communicate with people worldwide through modes of interactions of their own choices. Introduction of the Internet into language classrooms is, thus, not simply a way to present old content in a new package or to attract students' attention temporarily but it helps construct new English learning contexts, especially for EFL students, where they can find learning appealing, meaningful and become a part of their lives since they can relate themselves and their studies to real world activities. For example, learners can read news from CNN at the same time as local people to check latest news of events at one click and validate its reliability with other online information sources. Geographical boundaries are

digitally wiped out. There are high potentials to energize life-long, autonomous or collaborative learning. What EFL/ESL teachers should take into account is how to integrate the Internet and activities to suit learners' needs, interests, and goals of learning.

This current study explored learners' activities in three aspects: WWW searches, online discussion and homepage construction. It is suggested that for information searches, teachers should discuss with learners what search engines to use, how to search, what to expect from search results such as Webpages designed for experts or the public, and how to use them to serve learners' purposes. Demonstration is essential so that learners can understand from concrete examples of what it means to search the Internet. Also suggested is publishing guidelines to this process in the course homepage for their future references. Preparing learners to react to those encounters appropriately will potentially lessen their frustrations of unexpected floods of information and enable them to gain access to useful Websites, evaluate and select them based on their needs.

For fruitful results in terms of learners' acquisition of the target language, teachers may need to pre-select Web sites which serve course objectives and learners' main disciplines. For example, if one of the objectives is to enable learners to write English texts with commonly used structural patterns in medical science, teachers should look for homepages produced by government agencies, medical educational institutes or health/medical associations. Which to choose also depends on the level of language use that should be higher than learners' existing proficiency (Krashen, 1985) but accessible, authentic and learnable. Teachers may request for learners' feedback about the difficulty level of some selected texts after first readings in order to examine problems learners may encounter and then, present texts appropriate to them. In terms of learners' autonomous

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learning of English use from Website searches and readings, this should be a post activity of classroom instructions and supported with help sources such as links to online-dictionaries.

With regard to asynchronous discussion activities, this study sometimes suffered problems of message loss and delay or denial to gain access to the Triampaet group, which was established from Yahoo!Groups, due to different reasons such as heavy traffic, technical problems with Yahoo or network systems including other unexplainable reasons. From the experience, it is recommended that teachers consider using electronic platforms locally available. This is because once problems arise, it is easy to contact their authorities to investigate causes of problems and to search for possible solutions.

A suggestion in using online discussion groups in class is for teachers and learners to search for the appropriate number of group members to do discussions. The whole class forum can be arranged for a month to let learners adjust themselves to the new culture and search for their own interest groups. Afterwards, the discussion forum should be smaller for dynamic interactions; otherwise, the activity risks losing its charm since learners may ignore their peers' messages and this may lead to disconnection. Yet, the forum should not be too small because there is a tendency that members' assertions or arguments usually go to the same directions. Under such circumstances, learners may not find it intriguing to follow-up their peers' messages or interact with them. This study found that the number of four discussants in a group was too small and risked encountering the problem.

Another interesting finding of this research in relation to the online discussion activity is that learners need the teacher to participate in it. They feel curious about what

the teacher thinks about topics they are arguing. As far as the teacher acts as a group member among them, not the authority, learners would be more enthusiastic to join the activity. The teacher may wrap up learners' arguments at the end of the session so that his/her opinions will not distract their personal views. This activity can be an opportunity for teachers to establish rapport with learners, encouraging them to communicate in English , subtly modeling structures or writing patterns that most students find problematic, and providing them with help that they need so that they could achieve their goals of English use for communication.

With regard to Web site construction, it is recommended that the teacher should discuss the timeline with learners. It is useful to discuss their work progress periodically to detect difficulties they are encountering and render help or advice as may be required.

Combination of these Internet activities in English classroom may help learners (a) acquire vocabulary and structures from authentic texts, (b) observe how a text is written to enhance audience' understanding e.g. uses of pictures, and explanation of difficult terms, (c) think critically of what and how to write English texts to serve their writing purposes e.g. to instruct, to demonstrate cause-effect relationship, or to classify types of diseases, and (d) communicate purposefully and effectively. However, the data also show that though direct exposures to the rich environment where English is used as a medium for communication by a large number of Internet surfers worldwide, formal syntactic and writing instructions as well as feedback provided by the teacher are still essential for learners, especially those with low English proficiency.

Last but not least, from the findings of learners' increasing interests in and shifts

of their attitudes towards English class from negative to positive English, I would suggest

combining boundaries of English and their study disciplines. This effectively heightens

learners' motivation to learn about what they love in a foreign language.

5.3 Limitations of the Study

Limitations recurred in this research can be characterized into three aspects: its

power for generalizability, participant recruitment, and translation. Since the research

framework is mainly in the qualitative paradigm with the purposes of understanding a

phenomenon in its naturalistic setting, the study did not intentionally attempt to explain

different contexts or different groups of participants. This is because the goal of this type

of research is to gain insights into complexity and dynamic nature of a specific context

and its uniqueness.

Another limitation is that all the participants shared many similar characteristics

such as gender, area of study, age, nationality and their first language. These similarities

made it inappropriate to assume that the research informants represented all medical

students.

Also considered a limitation is that data were collected in different

languages: Thai and English. If it was an interview part, the account needed to be

translated from Thai into English by the researcher. Yet, if it was excerpts from learners'

email messages or writings, then, the account was directly taken to the study without the

researcher's charge in cleaning-up their writings. When putting the data together in writing this research, messages might contain some disturbances of smooth move of text flow.

The final issue that was a constraint of this current study is the materials used to compare changes in students' writings at the start and the end of the semester. They differed in topics. Such a characteristic may have affected learners in terms of the length of texts and their contents.

5.4 Recommendations for Future Research

Naturally, each study is conducted within its scope for specific purposes and, thus, is likely to provide an angle of understandings of a picture. So is this current study. Though it could give contributions to the field of foreign/second language learning/writing in the environment where the Internet was integrated, it can place itself as a piece of jigsaw among other pieces from previous research findings. Obviously, further studies are needed so as to enhance our understandings of the nature of applications of the Internet for English teaching and learning/writing efficacy. The following presents some of possible research agendas.

The participants of the study were five male pre-medical students, engaging in Internet activities that promoted their English learning and writing development. I would recommend that future studies may include both male and female participants and different disciplines such as engineering, business or education. Though some researchers have carried out gender agenda, no one designs studies that recruit male and female pre-medical students or those in different disciplines in EFL contexts that

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combine different Internet activities together in an English-for-specific- purpose class. This may render new discoveries distinctive from studies mostly conducted in ESL contexts.

Also worth-considering is research on perceptions of both teachers and learners. Since this study focused on the perceptions of learners, it opens the gap to study on how both parties feel about Internet uses. This would provide additional information to existing literature.

In terms of study time, the current study was conducted within one semester in order to get findings on the participants' perceptions of their writing development and to gain the insights into learners' writing products whether they are affected by activities in the Internet milieu. While some of previous studies argued that accuracy in learners' online messages decreased after learners' excitement about applications of the Internet faded away, this current research revealed different finding. All participants' accuracy in their last piece of writing show slight improvement. It would also be informative to conduct research in a more prolonged period of time in order to produce substantial and conclusive findings.

Finally, some of the results of the qualitative part of this study may be employed in follow-up studies for generalizable purposes. Researchers may wish to consider data collection from a larger sample size. From findings from the study, they may generate statements and construct a questionnaire to conduct a survey. Viewing the same focus through a different lens might enhance our understandings of English learning and writing in the Internet environment in greater depth.

5.5 Conclusion

Chapter 5 addresses summaries of the findings as described in details in Chapter 4 and discussions. It also includes pedagogical implications which may be helpful for those interested in applying the Internet in their language classroom. Since this study focuses on the issues related to how students perceive uses of the Internet activities in their language classroom and if they enhance their English learning/writing competence, it is open to limitations which are also addressed in this chapter. At the end of the chapter, recommendations for future research are offered.

REFERENCES

Adler, P.A. & Adler, P. (1994). Observational Techniques. In N.K. Denzin & Y.S.Lincoln (Eds.), *Handbook of qualitative research*. Thousand Oaks, CA:Sage.

Askehave, I.&Swales, J.M. (2001). Genre identification and communicative purpose: A problem and a possible solution. *Applied Linguistics, 22*(2), 195-212.

Angrosino, M. V. & de Perez, K. (2000). Rethinking observation. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of Qualitative Research (673-702).* Thousand Oaks, California: Sage.

Anton, M. (1999). The discourse of a learner-centered classroom: Sociocultural perspectives on teacher-learner interaction in the second-language classroom. *The Modern Language Journal, 83(3),* 303-318.

Beach, R. & Lundell, D. (1998). Early adolescents' use of communication in writing and reading.. In D. Reinking. et. al. (Ed.), *Handbook of literacy and technology* (93-112). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Beauvois, M. (1996). Personality types and megabytes: Student attitudes toward computer medicated communication (CMC) in the language classroom. *CALICO Journal, 13*(2-3), 27-45.

Belcher, D. (1999). Authentic interaction in a virtual classroom: Leveling the playing field in a graduate seminar. *Computers and Composition, 16*(2), 253-267.

Belcher, D. (2002). Cyberdiscourse, evolving notions of authorship, and the teaching of writing. In M. Hewings, *Academic writing in context: Implications and applications.* Birmingham: University Press.

Birkerts, S. (1994). *The Gutenberg elegies: The fate of reading in an electronic age*. Boston: Faber and Faber.

Biesenbach-Lucas, S & Weasenforth, D. (2001). E-mail and word processing in the ESL classroom: How the medium affects the message. *Language Learning and Technology, 5*(1), 135-165.

Bloch, J. (2000). *Computers and the L2 student.* Presented at the Symposium on Second Language Writing, West Lafayette, IN.

Bloch, J. (in press). *Constructing webpages, constructing the Internet: Webpage design in the L2 composition writing.*

Bloch, J. & Brutt-Griffler, J. Implementing CommonSpace in the ESL Composition Classroom. In D. Belcher & A. Hirvela (Eds*.), Linking literacies: Perspectives on L2 reading-writing connections.* Ann Arbor : University of Michigan Press

Bolter, J.D. (1991). *Writing space: The computer, hypertext, and the history of writing.* Hillsdale, NJ: Lawrence Erlbaum.

Bonk, C.J. & Cunningham, D.J. (1998). Searching for learner-centered, constructivist, and sociocultural components of collaborative educational learning tools. In Curtis Jay Bonk & Kira S. King, *Electronic collaborators: Learner-centered technologies for literacy, apprenticeship, and discourse.* Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.

Bonk, C.J. & King, K.S. (1998). *Electronic collaborators: Learner-centered* technologies for literacy, apprenticeship, and discourse. Mahwah, N.J.: Lawrence Erlbuam Associates, Publishers.

Bourdieu, P. (1977). The economics of linguistic exchanges. *Social Science Information, 16*(6), 645-668.

Braine, G. (1997). Beyond word processing: Networked computers in ESL writing classes. *Computers and Composition,14*, 45-58.

Braine, G. (2001). A study of English as a foreign language (EFL) writers on a local-area network (LAN) and in traditional classes. *Computers and Composition, (18)*, 275-292.

Brett, P. (2000). Integrating multimedia into the Business English curriculum: A case study. *English for Specific Purposes, 19*(3), 291-296.

Brutt-Griffler, J. & Samimy, K. (1999). Revisiting the colonial in the postcolonial: Critical praxis for nonnative-English-speaking teachers. *TESOL Quarterly, 33*(3), 413-431.

Cairncross, F. (1997). *The Death of Distance: How the Communications Revolution will Change ourLlives*. Boston, Mass.: Harvard Business School Press.

Chen, C.F. (1998). *Integrating Internet resources into the learning of English as a* Foreign Language in a Taiwanese high school: A case study. Unpublished Dissertation, University of Massachusetts Amherst.

Chun, D. (1994). Using computer networking to facilitate the acquisition of interactive competence. *System, 22*(1), 17-31.

Chun, D. & Plass, J.L. (1996). Effects of multimedia annotations on vocabulary acquisition. *The Modern Language Journal, 80*(2), 183-198.

Chun, D. & Plass, J.L. (2000). Networked multimedia environments for second language acquisition. In M. Warschauer & R. Kern, *Network-based language teaching: Concepts and practice*. Cambridge: Cambridge University Press.

Collis, B & Remmers, E. (1997). Cross-cultural communication and interaction. In B.H. Khan (Ed.), *Web-based instruction*. Eaglewood Cliffs, N.J., Educational Technology Publications.

Cope, B., Kalantzis, M., & New London Group. (2000). *Multiliteracies: Literacy learning and the design of social futures*. New York: Routledge.

Cornell, R. & Martin, B.L. (1997). The role of motivation in Web-based instruction. In B.H.Khan (Ed.), *Web-based instructions*. Eaglewoods Cliff, N.J.: Educational Technology Publications.

Costello, S. (2000, June 26). "Billion-page Web catalog cited." Retrieved April 1, 2002, from http://iwsun4.infoworld.com/articles/hn/xml/00/06/26/000626hngoogle.xml.

Cummins, J. (1996). *Negotiating identities: Education for empowerment in a diverse society*. Ontario, CA.: California Association for Bilingual Education.

Darhower, M. L. (2000). *Synchronous computer-mediated communication in the intermediate foreign language class: A sociocultural case study*. Unpublished Dissertation, University of Pittsburgh.

Denzin, N.K. & Lincoln, Y.S. (Eds.). (2000). *Handbook of qualitative research.* Thousand Oaks, California: Sage.

dos Santos, V. B. M. P. (2002). Genre analysis of business letters of negotiation. *English for Specific Purposes, 21*(2), 167-199.

Dudley-Evans, T. & St. John, M.J. (1998). *Developments in English for specific*

purposes: A multi-disciplinary approach. Cambridge: Cambridge University Press.

Ellis, R. (1994). *The study of second language acquisition.* Oxford: Oxford University Press.

Feak, C.B., Reinhart, S.M. & Sinsheimer, A. (2000). A preliminary analysis of law review notes. *English for Specific Purposes, 19*(3), 197-200.

Fontana, A. & Frey, J. (2000). The interview: From structured questions to negotiated text. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, California: Sage.

Freire, P. (1970). *Pedagogy of the oppressed.* Translated by Myra Bergman Ramos**.** New York: Seabury Press.

Furstenberg, G., Levet, S, English, K. & Maillet, K. (2001). Giving a Virtual Voice to the Silent Language of Culture: The *Cultura* Project. *Language Learning Technology, 5*(1), 55-102.

Gold, R.L. (1958). Roles in sociological field observation. *Social Forces, 36*, 217-223.

Gonzalez-Bueno, M. (1998). The effects of electronic mail on Spanish L2 discourse. *Language Learning & Technology, 1*(2), 55-70.

Handa, C. (2001). Digital rhetoric, digital literacy, computers, and composition. *Computers and Composition, 18*, 1-10.

Hiltz, S. R. (1998). *Collaborative Learning in Asynchronous Learning Networks: Building Learning Communities* (Invited Address at Web 98). Orlando, Florida: New Jersey Institute of Technology.

Ho, L. (2000). Developing intercultural awareness and writing skills through e-mail exchange. <u>*The Internet TESL Journal, 6*</u>(12), 2001.

Huckin, T. & Coady, J. (1999). Incidental vocabulary acquisition in a second language studies. *Second language acquisition, 21*(2), 181-193.

Hunt, K. (1965). *Grammatical structures written at three grade levels.* Champaign, IL: National Council of Teachers of English. (ERIC Document Reproduction Service No. ED 113 735).

Hunt, K. (1970). Syntactic maturity in children and adults. *Monographs of the society for research in child development, 53*(134). Chicago: Chicago University Press.

Global Internet audience increases (2002, March 19). Retrieved May 15, 2002, from
http://www.nua.ie/surveys/index.cgi?f=VS&art_id=905357762&rel=true.

Global Internet Statistics: Sources & References. Retrieved April 25, 2003, from
http://www.glreach.com/globstats/index.php3.

Jaeger, R. M. (1997). Survey research methods in education. In R.M. Jaeger,
Methods for research in education. Washington, D.C.: American Educational
Research Association.

Johnson, D.M. (1992). *Approaches to research in second language learning*. New
York: Longman.

Kannan, J. and Macknish, C. (2000). Issues affecting on-line ESL learning: A
Singapore case study. *The Internet TESL Jounal, 6*(11).

Kasper, L. (1998). ESL *and the Internet: content, rhetoric, and research.* Paper
presented at rhetoric and technology in the next millennium: An asynchronous
online conference. Retrieved November 9, 2002, from
http://members.aol.com/Drlfk/rhetoric.html

Kern, R.G. (1995). Restructuring classroom interaction with networked computers:
Effects on quantity and characteristics of language production. *Modern
Language Journal, 79*(457-476).

Kern, R. (1995). Restructuring classroom interaction with networked computers:
Effects on quantity and quality of language production. *Modern Language
Journal, 79*, 457-476.

Kern, R. (1996). Computer-mediated communication: Using e-mail exchanges to
explore personal histories in two cultures. In M. Warschauer (Ed.):
Telecollaboration in foreign language learning. Honolulu, Hl: University of
Hawai'i Second Language Teaching and Curriculum Center.

Kern, R. & Warschauer, M. (2000). *Network-based language teaching: Concepts
and practice.* Cambridge: Cambridge University Press.

Kim, H. (2001). *Initial efforts of three ESL teachers to effectively utilize network-
based language teaching*. Unpublished Ph.D. dissertation. University of New
York at Buffalo.

Krajka, J. (2000). Using the Internet in ESL writing instruction. *The Internet TESL
Journal,1*(11).

Kramsch, C., A'Ness, F & Lam, W.S.E. (2000). Authenticity and authorship in the
computer-mediated acquisition of L2 literacy. *Language Learning &*

Technology, 4 (2), 78-104.

Krashen, S. (1985). *The input hypothesis : issues and implications.* New York :
Longman.

Kress, G. (1998). Visual and verbal modes of representation in electronically
mediated communication: The potentials of new forms of text. In I. Snyder
(Ed.), *Page to screen: Taking literacy into the electronic era.* London:
Routledge.

Lam, W.S.E. (2000). L2 literacy and the design of the self: A case study of a
teenager writing on the Internet. *TESOL Quarterly, 34*(3), 457-482.

Lanham, R. (1993). *The electronic word: Democracy, technology, and the arts.*
Chicago, IL: University of Chicago Press.

Lather, P. in press. Validity as an incitement to discourse: Qualitative research and
the crisis of legitimacy. In V. Richardson (Ed.), *Handbook of research on
teaching ,4th ed.* Washington DC: AERA.

Lee, K. (2000). Energizing the ESL/EFL classroom through Internet activities.
The Internet TESL Journal, 6(4).

Lee, L. (1998). Going beyond classroom learning: Acquiring cultural knowledge via
on-line newspapers and intercultural exchanges via On-line chatrooms.
CALICO, 101-120.

LeLoup, J.W. & Ponterio, R. (2000). Enhancing authentic language learning
experiences through Internet technology. *ERIC Digest*.

LeLoup, J.W. & Ponterio, R. (2002). On the net. *Language Learning &
Technology, 6***(1), 3-5.**

Lemke, J.L. (1998). Metamedia literacy: Transforming meanings and media. In D.
Reinking, M., McKenna, L. Labbo, & R.D. Kieffer (Eds.), *Handbook of literacy
and technology: transformations in a post-typographic World.* Hillsdale, NJ:
Erlbaum.

Lin, A.M.Y. (1999). Doing-English-lessons in the reproduction or transformation of
social worlds? *TESOL Quarterly, 33*(3), 393-412.

Lincoln, Y.S. & Guba, E.G. (1985). *Naturalistic inquiry.* Beverly Hills, CA: Sage.

Lincoln, Y. & Guba, E. (2000). Paradigmatic controversies, contradictions, and
emerging confluences. In Norman K. Denzin & Yvonna S.Lincoln. (Eds.)
Handbook of qualitative research. Thousand Oaks, California: Sage.

Meskill, C & Ranglova, K. (2000). Socio-collaborative language learning in Bulgaria. In Mark Warschauer and Richard Kern (Eds.), *Network-based language teaching: Concepts and practice*. Cambridge: Cambridge University Press.

Middleton, S. (1996). Doing qualitative educational research in the mid-1990s: Issues, contexts and practicalities. *Waikato Journal of Education (2):* 1996.

Miles, M. & Huberman, A. (1994). *Qualitative data analysis: A sourcebook of new methods*. Beverly Hills: Sage Publications.

Mohan, B. A. (1986). *Language and content*. Reading, Mass.: Addison-Wesley.

Murray, D.E. (2000). Protean communication: the language of computer-mediated communication. *TESOL Quarterly, 34*(3), 397-421.

Nagata, N. (1999). The effectiveness of computer-assisted interactive glosses. *Foreign Language Annals, 32*(4), 469-479.

Nation, I.S.P. (1999). *Learning vocabulary in another language.* New Zealand: Victoria University of Wellington.

New London Group (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66*, 60-92.

Norton, B. (1998). Rethinking acculturation in second language acquisition. *Prospect: A Journal of Australian TESOL, 13*(2), 85-100.

Osuna, M.M. & Meskill, C. (1998). Using the World Wide Web to integrate Spanish language and culture: Pilot Study. *Language Learning & Technology, 1*(2), 71-79.

Paivio, A. (1971). *Imagery and verbal processes*. New York: Holt, Rinehart & Winston.

Paivio, A. (1990). *Mental representations: A dual coding approach*. New York: Oxford University Press.

Pang, P.M.N. & Hung, D.W.L. (2001). Activity theory as a framework for analyzing CBT and E-learning environments. *Educational Technology, 41*(4), 36-42.

Pellettieri, J. (2000). Negotiation in cyberspace: The role of chatting in the development of grammarical competence. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching: Concepts and practice.* New York: University Press.

Pennington, M. (1996). *The computer and the non-native writer: A natural partnership.* Cresskill, New Jersey: Hampton Press, Inc.

Peterson, Mark. (1999). World Wide Web resources for the ESP practitioner. *English for Specific Purposes, 18* (Supplementary 1), S75-S80.

Pica, T. (2000). Tradition and transition in English language teaching methodology. *System, 28,* 1-18.

Pierce, B.N. (1995). Social identity, investment, and language learning. *TESOL Quarterly(29)*, 1, 9-31.

Polio, Charlene G. 1997. Measures of Linguistic Accuracy in Second Language Writing Research. *Language Learning, 47*(1), 101-143.

Postman, N. (1995). *The end of education: Redefining the value of school*. New York: Vintage Books.

Prapphal, K. 2000. "*An Evaluation of Language Skills and Non-Linguistic Factors through WWW and E-Mail Tasks*." Presented at the 3rd Conference on the Use of New Technologies in Foreign Language Teaching (23-25 March 2000) at the University of Technology of Compiegne, France.

Prapphal, K. (2000-2001). Language teachers and the changing roles. (In Thai). Pasaa,17.

Reeves, T. C. & Reeves, P.M. (1997). Effective dimensions of interactive learning on the World Wide Web. In B. H. Khan (Ed.), *Web-based instruction*. Eaglewoods, N.J.: Educational Technology Publications.

Regan, A. E. & Zuern, J.D. (2000). Community-service learning and computer-mediated advanced composition: The going to class, getting online, and giving back project. *Computers and Composition, 17*, 177-195.

Richards, C. (2000). Hypermedia, Internet communication, and the challenge of redefining literacy in the electronic age. *Language Learning & Technology, 4*(2), 59-77.

Robert, S. & Mc Ginty, S. (1995). Reflections from the field: Awareness of presence: Developing the researcher self. *Anthropology & Education Quarterly, 26*(1), 112-122.

Schumann, J. (1978). Social and psychological factors in second language acquisition. In R. Gingras, *Second language acquisition and foreign language teaching*. Arlington, VA.: Center for Applied Linguistics.

Sengupta, S. (2001). Exchanging ideas with peers in network-based classroom: An aid or a pain? *Language Learning & Technology, 5*(1), 103-134.

Shetzer, H. and Warschauer, M. (2000). An electronic literacy approach to network-based language teaching. In M. Warschauer and R. Kern (Eds.), *Network-based language teaching: Concepts and practice*. Cambridge: Cambridge University Press.

Singhal, M. (1997). The Internet and foreign language education: Benefits and challenges. *The Internet TESL Journal, 3*(6). Retrieved March 28, 2002, from http://iteslj.org

Slaouti, D. (2002). The World Wide Web for academic purposes: old study skills for *new? English for Specific Purposes, 21*(2), 105-124.

Soler, V. (2002). Analyzing adjectives in scientific discourse: an exploratory study with educational applications for Spanish speakers at advanced university level. *English for Specific Purposes, 21*(2), 145-165.

Sotillo, S. (2000). Discourse functions and syntactic complexity of synchronous and asynchronous communication. *Language Learning & Technology, 4*(1), 82-119.

St. John, E., & Cash, D. (1995). Language learning via e-mail: Demonstrable success with German. In M. Warschauer (Ed.), *Virtual connections: Online activities and projects for networking language learners*. Honolulu, Hi: University of Hawai'i, Second Language Teaching and Curriculum Center.

Stake, R.E. (1997). Case study methods in educational research: seeking sweet water. In R.M. Jaeger, *Complementary methods for research in education*. Washington D.C.: American Educational Research Association.

Stake, R.E. (2000). Case studies. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research*. Thousand Oaks, California: Sage.

Stepp-Greany, J. (2002). Students perceptions on language learning in a technological environment: Implications for the new millennium. *Language Learning & Technology, 6*(1), 165-180.

Stockwell, G & Harrington, M. (2003). The incidental development of second language proficiency in native-non native speaker email interactions. *CALICO, 20*(2).

Stryker, S. B., Leaver, B. L., & NetLibrary Inc. (1997). *Content-based instruction in foreign language education models and methods*. Washington, D.C.: Georgetown University Press.

232

Sullivan, N. & Pratt, E. (1996). A comparative study of two ESL writing environments: A computer-assisted classroom and a traditional oral classroom. *System, 29(4),* 491-501.

Swales, J. (1990). *Genre analysis : English in academic and research settings.* Cambridge: New York.

Toyoda, E. H., R. (2002). Categorization of text chat communication between learners and native speakers of Japanese. *Language Learning & Technology, 6*(1), 82-99.

Turkle, S. (1997). Computational technologies and images of the self. In A. Mack, *Technology and the rest of culture*. Columbus: The Ohio State University Press.

Upton, T. A. & Connor, U. (2001). Using computerized corpus analysis to investigate the textlinguistic discourse moves of a genre. *English for Specific Purposes, 20*(4), 313-329.

Wallace, M.J. (1998). *Action research for language teachers*. Cambridge: Cambridge University Press.

Warschauer, M. (1995). *E-mail for English teaching. Alexandria.* VA: TESOL Publications.

Warschauer, M. (1996). Comparing face-to-face and electronic discussion in the second language classroom. *CALICO Journal 13*(2), 7-26.

Warschauer, M. (1996). Motivational aspects of using computers for writing and communication. In M. Warschauer (Ed.), *Telecollaboration in foreign language learning* (pp. 29-46). Honolulu, HI: Second Language Teaching & Curriculum Center (University of Hawai'i Press). Retrieved April, 25, 2002 from http://www.nflrc.hawaii.edu/NetWorks/NW01/.

Warschauer, M. (1997). Computer-mediated collaborative learning: Theory and practice. *Modern Language Journal, 81*(3), 470-481.

Warschauer, M. (1998). Interaction, negotiation, and computer-mediated learning. In M. Clay (Ed.), *Practical applications of educational technology in language learning.* Lyon, France: National Institute of Applied Sciences.

Warschauer, M. (1999). *Electronic literacies: Language, culture, and power in online Education.* Lawrence Erlbaum Associates, Inc.

Warschauer, M. (2000). On-line learning in second language classrooms. In M. Warschauer & R. Kern, *Network-based language teaching: Concepts and*

     practice. Cambridge: Cambridge University Press.

Warschauer, M. (2000). The changing global Economy and the future of English
     teaching. *TESOL Quarterly, 5*(34), 511-535.

Warschauer, M. (2002). *Reconceptualizing the digital divide.* First Monday 7(7).

Warschauer. M. & Lepeintre, S. (1997). Freire's dream or Foucault's nightmare:
     Teacher-student relations on an international computer network. In R. Debski, J.
     Gassin, & M. Smith (Eds.), *Language learning through social computing.*
     Parkville, Australia: Applied Linguistics Association of Australia.

Warschauer, M., & Meskill, C. (2000). *Technology and second language learning. In
     J. Rosenthal (Ed.),* Handbook of undergraduate second language education
     (pp. 303-318). *Mahwah, New Jersey: Lawrence Erlbaum.*

Warschauer, M.,Shetzer, H. & Meloni, C. (2000). *Internet for English teaching.*
     Alexandria: TESOL.

Warschauer, M., Turbee, L., & Roberts, B. (1996). Computer learning networks and
     student empowerment*. System, 24*(1), 1-14.

Warschauer, M. & Whittaker, P.F. (1997). The Internet for English teaching:
     Guidelines for teachers. *The Internet TESL Journal, 3*(10), 27-33.

Weigel, V. B. (2002). *Deep learning for a digital age: technology's untapped
     potential to enrich higher education* (1st ed.). San Francisco: Jossey-Bass.

Wilbur, S.P. (1997). An archaeology of cyberspaces virtuality, community and identity.
     In David Porter, *Internet culture*. N.Y.: Routledge.

Woodlief, A.M. (1997). *Changing the paradigm: Hypertext and interactive student-
     centered learning*. Retrieved January 9, 2003, from
     http://www.vcu.edu/engweb/home/horizon.htm.

Wright, M. (2003). Why can't Thai students be successful in learning English?
     Matichon Weekly, 23(1185), 72.

Yin, R.K. (1989). *Case study research: Design and methods*. Newbury Park: Sage
     Publications.

Yoshi, M. & Flaitz, J. (2002). Second language incidental vocabulary retention: The
     effect of pictures and annotation types. *CALICO Journal, 20*(1), 33-58.

CONSENT FORM

Protocol # HS-027E

CONSENT FOR PARTICIPATION IN RESEARCH

I consent to participating in research entitled:

Dr. Keiko Samimy, Principal Investigator, or her authorized representative, Pornsiri Muangsamai, has explained the purpose of the study, the procedures to be followed, and the expected duration of my participation. Possible benefits of the study have been described, as have alternative procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Furthermore, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____   Signed: _____

                                                       (participant)

Signed: _____   Signed: _____

     (Principal Investigator or his/her   *(Person authorized to consent for*

     authorized representative)   *participant, if required)*

Witness: _____

June, 2002

Dear potential participants

I am Pornsiri Muangsamai, a doctoral candidate in Teaching English as a Foreign/Second Language Program, College of Education at the Ohio State University. Currently, I am working with Dr. Keiko Samimy, a faculty member at the Ohio State University on a dissertation entitled "Integration of the Internet in English for Pre-Medical Students: Students' perspectives".

The overall purpose of this dissertation is to understand undergraduates' perceptions of learning English in the Internet-integrated environment in order to suggest ways to modify, or establish English courses with the integration of the Internet and construct teaching materials, which would serve learners' needs and interests.

I need volunteers to participate in my study. As participants, you will be requested to 1) be observed and interviewed, and 2) submit your journals and some of

your written assignments while taking English for Pre-Medical Students I course. The interview will be conducted once every two weeks and it will last 40-60 minutes each time. It will be audio-taped for research purposes only. All the data will not be shared with anyone outside the research team.

If you have any questions during the course of study, please contact me at 302 Faculty of Humanities, Kasetsart University. You can also call me at 579-5566, or email me at mpornsiri2002@yahoo.com.

Your participation is greatly encouraged and highly appreciated.

Thank you.

Sincerely

Pornsiri Muangsamai

APPENDIX   C

INTERVIEW (FOR PARTICIPANT SELECTION)

Name:

Phone Number/E-mail:

Interest level in learning English:

5   I am extremely interested in learning English.

4   I am very interested in learning English.

3   I am somewhat interested in learning English.

2   I am not very interested in learning English.

1   I am not at all interested in learning English.

Please explain your reason(s) of the selection (e.g. strong support from the family,

irrelevance of English to daily life, or benefits for your area of study) _____

_____

_____

Interest level in the Internet:

5   I am extremely interested in learning English.

4   I am very interested in learning English.

3   I am somewhat interested in learning English.

2   I am not very interested in learning English.

1   I am not at all interested in learning English.

        Please explain your reason(s) of the selection

_____

_____

Interest level in learning English in the Internet-integrated environment:

5   I am extremely interested in learning English.

4   I am very interested in learning English.

3   I am somewhat interested in learning English.

2   I am not extremely interested in learning English.

1   I am not very interested in learning English.

        Please explain your reason(s) of the selection

_____

_____

Please describe what you expect from learning English in the Internet-integrated

environment. _____

_____

Experience in use of computers.

5   I am very experienced at using computers for a variety of purposes (please list

        them.) _____

3   I use computers rather often.

3   I use computers occasionally.

2   I do not use computers very often.

1   I almost never use a computer.

Have you participated in activities on the Internet?

___Information search   ___Web page construction   ___Listserv

___Synchronous Chatting   ___Netmeeting   ___E-mail

___Others (please specify.) _____

Which of the following represent you most?

___Poor English learner   ___Intermediate English learner

___Advanced English learner   ___Poor English user

___Intermediate English learner   ___Advanced English learner

In three words, how would you describe your personality?

_____

What was your entrance exam score of English? _____

APPENDIX   D

INTERVIEWS FOR DATA COLLECTION

I. Interviews during the semester include the following topics.

1. Experience with the Internet

2. Applications of computer technologies

3. Perceptions of "learning", "tools", "achievement in writing"

4. Problems/Benefits in using the Internet

II. Semi-structured Interview Questions.

1. What did you like the most about the Internet?

2. What did you like least?

3. What aspects of activities on the Internet helped you improve your English writing?

4. Were there any aspects on the Internet-integrated class you found unhelpful?

5. Did you use online dictionaries, translation machines, the textbook etc for your learning? How were they useful for you?

6. Do you feel that your writing in English has changed in any way from the beginning to the end of the study? If so, in what ways?

7. Do you feel that your attitude toward English learning has changed in any way from the beginning to the end of the study? If so, in what ways?

8. Is there anything else you would like to tell the researcher about your experience with the Internet-integrated learning?

III. Semi-structured Interview Questions (Community)

1. How would you describe the community on the Internet?

2. Do you feel comfortable to participate in the community? Why or why not?

3. What have you gained from the community?

4. What do you like most about the community?

5. What do you like least about the community?

6. How does the community influence you and your learning?

7. What would you recommend in order to develop the community?

8. Have you found any changes/differences of your learning in class and online?

9. How important is the community for you?

10. What would you like to add to inform the researcher of the community from your perspectives?

IV. Writing Before/After (Items 1-8) and After the Internet Integration (Items 8-12)

1. How would you describe your English writing?

2. What were your difficulties in writing?

3. How did you manage those difficulties to facilitate your writing?

4. Did you pay attention to your writing and your writing process?

5. When you wrote, do you think about who your audience was?

6. Who read your composition?

7. Did the audience affect what and how you wrote?

8. What were the tools you use for your writing: dictionaries, feedbacks from peers via face-to-face discussions or CMC, Web sites etc?

9. How do you feel about the tools and your writing development?

10. How many drafts did you write before submitting the finished product to your teacher?

11. What do you think you acquired from writing?

12. What would you like to add to inform the researcher of your writing?

APPENDIX   E

EXAMPLES OF CLASS HOMEPAGES

Course Homepage
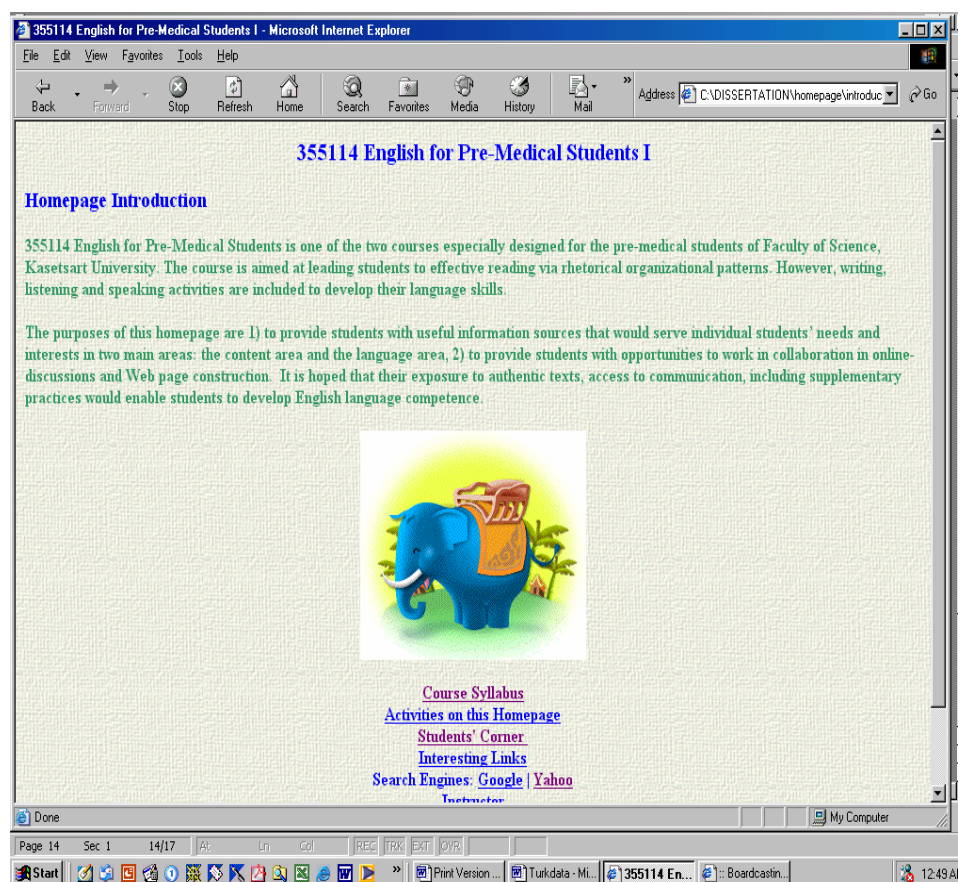
Students' Homepages

Cancer Homepage

Body Building Homepage

Yoga Homepage

Interview

Interviewer : Pongsit Chanapai (Tao)
Interviewee : Mr. Justin Herold of Iyenga Yoga center, Thailand

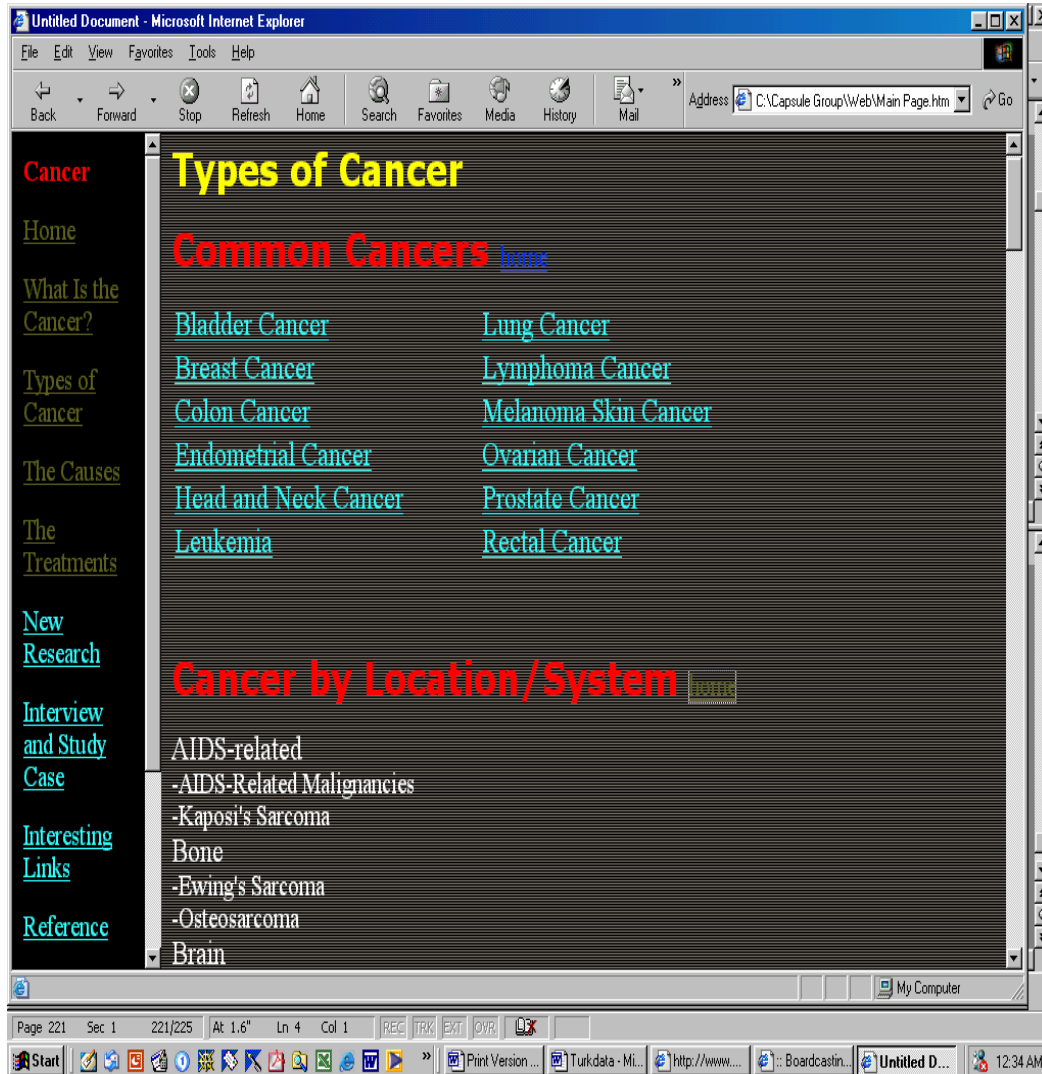Mr. Justin Herold was a businessman in America. In 1979, he started to practise Yoga from master Iyenga and discovered it was a thing what he needed for his health. So he dedicated himself in learning Yoga. And in 1989 he started to be a Yoga teacher in a school which is under to his master's name, Iyenga. These are conclusions of interviewing him.

Mr. Justin Herold has taught Yoga for 13 years since 1989 because he found that Yoga offers the best way to keep himself healthy over the long course of his life. He told that there were many kinds of sports or exercises that were good for our health, but they caused injuries to our body too. He used to run in long distance. He knew that running was good for him but it leaded to joint injuries. On the other hand, Yoga hardly make injuries so it is the safest exercise.

Because Yoga is the best exercise for him, he defines Yoga (Sanskrit word) as "union". This union covers both body and mind. We can have healthy body and good aspects due to its meaning. Moreover, Yoga practice doesn't finish as soon as we get

APPENDIX   F

EXAMPLES OF FIRST AND LAST PIECES OF WRITING

Ken

First Message

Khachen is the name of mine. you can call me Ken ,it's my nickname . I was born in A district, A province, the beautiful small town. My birthday is 19 th April 1982. In my family, there are my parents, one sister, two brothers and me. I started to learn at A school, when I'm in pratom 4 I studied at A school .I studied high school at B school. After graduating I go to study the pre medical course at science faculty, A University. I'm proud in my course and my university. In my spare time, I love to planting, read religious and political book…

Last Message

On many survey paper, there are something tell us that most of the patients want to know about their health and their condition of disease. But most of the physician think that it is not suitable to tell some truth to the patient such as the last stage of cancer. But treatment without any information is not fair for the patient, the doctor should respect in the patient right. They should only tell some important information. There is the possible requestion that the patient's family begs the doctor to close the facts about the patients facts. The careful conference is the essential thing on the affair…

Po

First Message

My name is Sasin Keng-dee. I was born on 14th November 1984. I have almost nothing to say about my childhood since I didn't learn and do anything much in the kindergarten and my primary school. But it was changed when I finished them and entered E School where I have learnt lots of lesson I couldn't learn anywhere. Now I know how the life in the real world was. I knew that nothing was perfect as I had imagined before. Some of my classmates had an economic problem in their families, and some hadn't even a place suitable for living (they lived in a small hut next to the railroads)…

Last Message

The doctor has to face many different patients who have different thought, belief, religious. The physician has to consider who he can tell the truth if the patient has a very serious disease. Mostly, patients would like them to be told. In some cases, however, they wouldn't. For this reason, the doctor must learn the truth-telling and withholding art.

It is suggested that the doctor shouldn't tell the patients who can't accept the truth. These types of patients include the patients who may commit suicide or have formerly stated not to be told the truth. On the other hand, if the doctor considers the patient should be told, the patient should be told all the informations about the disease except ones who is considered not want to know some details such as the risk and the alternative treatment…

Ek

First Message

My name is Ekkachai Meemak. My nickname is Ek but my friends call me 'Mega'. I'm 18 years old .I have two sisters and one brother. My primary school is C school then I studied D school. My favorite sport is basketball, I played with my friends every day. My friends are kind and friendly. We like to play computer games together at game center near the school. Our favorite games are Starcraft, Diablo II and Ragnarok. But I studied hard too.

Last Message

After reading at http://cai.md.chula.ac.th/lesson/lesson4505, I know that he has severe cancer. I still is the same as the first decision in that telling him that he must be treated. The patient has severe cancer; thus, he must be treated immediatly. his journal may causes death so he shouldn't travel. Having severe cancer will be told to hiss wife for helping decision, if he agrees…

Kang

First Message

My name is Surat Sara. Nickname is Kang. Graduated from DS.RU. Now I'm 18 years old. I have one elder sister. She is studying at B University. My family is happy but sometimes have some problem.

My choice to study at PCM because I like the surrounding here. as I hear from other places, other medicine classes of other university have much stress and pressure between others. I don't like that kind of surrounding. Then I saw the advertisement of PCM. I decided to study here…

Last Message

From my last opinion about telling the patient his symptoms I think we should tell him because he's in metastasis stage of cancer. This stage can be treated although It 's less probability. Metastasis is the stage of cancer having spreading of cancer cells in a body. Similarly mushroom spore transmit into the air. That may cause the other organs infect cancer and make the patient die in soon. If he doesn't get careful treatment in time he die surely. In contrast If he's taked care well and get the properly procedure cancer cells could be eradicated permanently…

Turk

First Message

I am Kitti Sukmak. My friends call me Turk. I was born on November 17,1982 in a small province in the southern of Thailand. I have two young sisters Supajcharee and Prechaya. The former is studying in M.5 F School; the latter is studying in G School. I now live with my family which consist of people Mom, Dad, my sisters and me. I like sports very much especially for tennis I have been playing tennis for 11 years (I started to play tennis at 9 years old). About my studies when I was young (about 6-15 years old) my life was full of funny and exciting things. Day by day I played and played. I never touch the book even the examination was coming up…

Last Message

everybody wants to know the truths. There is 90% of patient who want to know the real diagnosis, prognosis and therapy and nowadays more doctor think that telling the truths to patient is correct.

But some truths that are not associated with the patient such as treatment alternative not need to be revealed. In some case if the physician has some believable reason that disclosure would create harmful, that truths may be justified to withhold...

EXCERPTS OF TRANSLATION

OF INTERVIEW TRANSCRIPTS FROM THAI INTO ENGLISH

1.   ผมว่า discuss น่าสนใจ สนุก ดีกว่านั่งอ่านแล้วตอบคำถาม เช่นเวลาผมอ่าน ผมหา

คำตอบไม่ได้ซักทีว่าจะตอบอะไร   เลยน่าเบื่อ ยิ่งเรื่องยาว ๆ ยิ่งน่าเบื่อ แต่ถ้าเป็นเรื่อง

discuss ก็จะดูว่าเป็นเรื่องอะไรแล้วก็ใช้ความคิดของตัวเองเขียน อาศัยประสบการณ์ตัวเอง

กับสิ่งที่เคยรู้ว่า เช่นวันนี้ เป็นเรื่องคนแก่ ที่ป่วยเป็นมะเร็งขั้นร้ายแรง โดยที่เจ้าตัวไม่รู้ ผมก็

ต้องมานั่งคิดแล้วว่า ทางเลือกมีสองทาง ถ้าบอก เขาก็แย่ แต่ถ้าไม่บอก เขาก็แย่ ทีนี้

ปัญหาก็คือว่า อันไหนจะแย่กว่ากัน ส่วนใหญ่ก็จะมีแค่สองประเด็นนี้เท่านั้น คืออันไหนจะแย่

กว่ากัน ถ้าเกิดบอก ผลที่ได้ก็มีสองทาง เขาอาจจะทำใจได้ หรือทำใจไม่ได้ ทีนี้ถ้าทำใจ

ได้ จะเกิดอะไรขึ้น ทำใจไม่ได้จะเกิดอะไรขึ้น ทีนี้ผมก็จะต้องเลือกดูว่า จะเลือกทางไหน

แล้วเลือกตอบตามที่คิดว่าดีที่สุด

Discussion was a fun, and very interesting activity. I preferred it to reading long

texts and answering to questions about the texts. Doing discussion, I usually read the

text rapidly to get the ideas about the text. Then, I'd contemplate them against my

experience and background knowledge in order to finalize my own opinions and put them into words. For example, today we read about a male senior unknowingly suffering the abdominal cancer at metastasis. To respond to this problem, I started from thinking of options for this guy and I came up with two. One was telling him but he might be in worse conditions (feeling discouraged and desperate). The other was not telling him but he would become worse anyway. The problem was which option would render more devastating outcome. If I told him, there would be two consequences. One was that he could accept his circumstance. The other was that he might not be able to stand the truth. Now, I needed to select which option was the best from my point of view, and chose to do accordingly (August 28, 2002).

2.　　　เวลาผมมองว่าเพื่อนใช้ภาษาดี ผมจะมองที่การใช้คำเชื่อม และคำที่ไม่ general มากเกินไปสำหรับผม เวลาเขียน ผมจะพยายามหาคำศัพท์ที่เป็น synonym เอาเข้ามาใช้แทนคำที่รู้อยู่บ้างแล้ว ผมคิดว่าการเขียนของผมพัฒนาขึ้น อย่างโป วลาเขียนผมว่าแล้วรู้สึกว่า เขารู้จักการใช้คำที่ต้องการสื่อความคิดของเขาได้ แต่บางอัน เวลาที่เขาเรื่องเขียนบางข้อความก็จะไม่ค่อยดูดีมาก แต่อย่างของกอล์ฟดีทุกอัน อย่างของกอล์ฟ เวลาเขานั่งเขียน เขาจะเรียบเรียงความคิดได้ดี และรู้จักคำศัพท์มาก ทำให้สามารถแสดงความคิดเห็นได้ดี อ่านแล้วก็เข้าใจดี

I evaluate my friends' writing from the use of connectives/modifiers, and vocabulary which is not too general. …When I read Po's message, he's very good at conveying his thoughts through the use of expressive words. However, sometimes, when

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he writes in a hurry, his text may not be as I expected. Another friend whose writing

impresses me is Golf. I observe (Ken sat near him.) *Golf's writing. He spends some time*

thinking and then starts composing his message. His organization of thoughts is very

good in that it enables him to communicate very clearly. His message shows the flow or

smooth move of thoughts and his repertoire of vocabulary (September 2, 2002).

3.	เวลาแสดงความคิดเห็น "Breaking Bad News" ความคิดเห็นของเราอาจจะไม่ตรง

กับเพื่อน พอเห็นความแตกต่างกัน ในเรื่องของความคิด ก็อยากจะเขียนตอบแสดงความ

คิดเห็นของเรา ที่คิดว่าน่าจะมีมุมมองที่น่าจะดีกว่า แต่พอได้รับคำตอบของเขา ทำให้รู้สึกว่า

ความคิดเห็นจากมุมมองของเขา ก็เป็นสิ่งที่ดีเหมือนกัน คือเริ่มมีการเปลี่ยนแปลงความ

คิดเห็นจากเดิม ที่ผูกติดกับความคิดของตัวเอง ก็จะเป็นการเปิดใจ ยอมที่จะมองในมุมที่ต่าง

ไปจากของเรา มากขึ้น

I discussed a case in "Breaking Bad News" and read Po's reaction to it. As soon

as finishing reading his message, I felt like responding to him immediately. I wanted to

convince him to agree with my opinion. I believed my view on the issue was formed from

a better angle and disagreed with what he stated/asserted. But when I received his

response, I also perceived that his assertion/argument sounded not less substantial at all.

This is another circumstance that changed me to become more mature. I'm more open-

minded and willing to listen to others, learning from them, and synthesizing data before

finalizing my own opinions.

APPENDIX   H

GUIDELINES FOR WORD COUNTS

1. Count contractions as one word whether correct or not.

2. Count numbers as one word.

3. Count proper nouns in English and in other languages as they are written. (e.g. = 2 words)

4. Do not count hyphenated words as single words. (e.g. well-written = 2 words)

5. Do not include essay titles in word count.

6. Do not include the guideline questions given by the teacher or phrases copied from the other sources such as a website in word count.

7. Count '&' as one word equal to 'and'.

8. Count a website name as one word. (e.g. www.google.com)

9. Count a possessive 's as one word.   (e.g. patient's = 1 word)

10. Count abbreviation according to its original word. (e.g. TV = 1 word, CABGS (coronary angioplasty bypass graft = 5 words).

(Adapted from Polio, 1997)

APPENDIX   I

GUIDELINES FOR T-UNITS AND CLAUSES

<u>T-units</u>

1. A T-unit is defined an independent clause and all its dependent clauses.

2. Count run-on sentences and comma splices as two T-units with an error in the first T-unit.

<u>Example</u> : My primary school is A school, then I studied B school.

                T   T

             1 error   error-free

3. For sentence fragments, if the verb or copula is missing, count the sentence as 1 T-unit with an error. If an NP is standing alone, attach it to the preceding or following T-unit as appropriate and count as an error. If a subordinate clause is standing alone, attach it to the preceding or following S and count it as 1 T-unit with an error.

4. When there is a grammatical subject deletion in a coordinate clause, count the entire sentence as 1 T-unit.

<u>Example</u> : My family is happy but sometimes have some problem. (1 T-unit)

5. Count both "so" and "but"" as coordinating conjunctions. Count "so that" as a subordinating conjunction unless "so" is obviously mean.

7. Do not count tag-questions as separate T-units.

8. Count S-nodes with a deleted complementizer as a subordinate clause as in: I believe that A and (that) B = 1 T-unit.

9. Count T-units I n parentheses as individual T-units.

(Adapted from Polio, 1997)

ERROR ANALYSIS

Directions: Underline any error found in each composition based on the guidelines

given below.

Error Guidelines

1. Do not count spelling errors (including word changes like "there/their").

2. Don't count missing commas between clauses or after prepositional phrases.

3. Base tense/reference errors on preceding discourse; do not look at the sentence in

isolation.

4. Don't count British usage as errors, (e.g. "in hospital," "at university," collective

nouns as plural).

5. Be lenient about article errors from translations of proper nouns.

6. Don't count errors in capitalization.

(Polio, 1997: 139-140)