Needs for and Problems about Academic English Reading of Veterinary Undergraduate Students at Kasetsart University

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Abstract

English Reading is one of the essential skills for university students in numerous disciplines. The reason for this is that most of academic literatures are published in English (Alderson, 1989). This study aims to investigate the needs and problems in reading academic materials in English of veterinary undergraduate students at Kasetsart University and to explore the strategies they used when reading English materials. The sample of this study was 100 third-year veterinary students at Kasetsart University. The instruments for data collection were a questionnaire and an interview. The data gained from the questionnaire survey were analyzed statistically using the Statistical Package for the Social Sciences program (SPSS).

The results indicated that the veterinary students greatly needed to read textbooks, research articles, research journals, and research reports of their discipline in English. The main purposes for reading these materials were to gain information for conducting a seminar paper and for doing a report. The students' significant barriers for English reading were general terms and technical terms. In contrast, grammatical knowledge was the least serious problem for them. The most frequent strategy used when unknown words were found was consulting a dictionary. The strategy used the least was reading aloud when the text became hard to understand.

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บทคัดย่อ

การอ่านเป็นทักษะหนึ่งที่จำเป็นอย่างยิ่งสำหรับนักศึกษาระดับอุดมศึกษาในหลายสาขาวิชา การวิจัยนี้มุ่งสำรวจความจำเป็นในการอ่านงานวิชาการภาษาอังกฤษของนักศึกษาปริญญาตรีคณะสัตว แพทยศาสตร์ มหาวิทยาลัยเกษตรศาสตร์ ตลอดจนสำรวจปัญหาในการอ่านและกลวิธีการอ่านของนักศึกษา กลุ่มตัวอย่าง คือ นักศึกษาชั้นปีที่ 3 คณะสัตวแพทยศาสตร์ มหาวิทยาลัยเกษตรศาสตร์ จำนวน 100 คน เครื่องมือที่ใช้ในการเก็บข้อมูล คือ แบบสอบถามและการสัมภาษณ์ ข้อมูลที่ได้รับจากการสำรวจโดย แบบสอบถามผ่านการวิเคราะห์โดยโปรแกรม SPSS

ผลการวิจัยพบว่านักศึกษามีความจำเป็นอย่างยิ่งในการอ่านหนังสือเรียน บทความวิจัย วารสาร วิชาการ และรายงานการวิจัยทางด้านสัตวแพทย์เป็นภาษาอังกฤษ วัตถุประสงค์หลักในการอ่าน คือ เพื่อ ค้นคว้าข้อมูลสำหรับทำรายงานวิชาสัมมนาและภาคนิพนธ์ นอกจากนั้น คำศัพท์ใหม่และคำศัพท์เฉพาะยัง เป็นปัญหาสำคัญในการอ่านงานวิชาการภาษาอังกฤษของนักศึกษา กระนั้นก็ตาม นักศึกษามีปัญหาด้าน ไวยากรณ์ภาษาอังกฤษน้อยที่สุด กลวิธีที่นักศึกษาใช้มากที่สุดคือ หาความหมายของคำจากพจนานุกรม ขณะที่การอ่านออกเสียงเมื่อเนื้อหาที่อ่านยากขึ้นเป็นกลวิธีที่นักศึกษาใช้น้อยที่สุด

Statement of the Problem

Up to the present, English has assumed the role of the world's major international language. Hutchinson and Waters (1987) state that a large number of people want to learn English because it is becoming the universal language of technology and commerce. English is, thus, the first foreign language taught at schools or colleges in a lot of English as a foreign language (EFL) countries, such as, Vietnam, Japan, South Korea, and, particularly, Thailand.

In higher education, students in many areas, such as, engineering, medical science, nursing science or even veterinary science have great needs of English. This may be because English has become the major language used in certain courses or programs at a university (Richards, 1985). One of the essential skills for university students is reading. To broaden their knowledge, students have to read textbooks, research articles, and journals, most of which are published in English. According to Anderson (1999), reading is considered an essential skill for students who study English as a second language (ESL) and as a foreign language (EFL).

However, first and second language (L1 and L2) reading researchers generally accept that ESL and EFL students tend to be inferior to native students in the areas of reading and writing (Mokhtari and Reichard, 2004). Most students possibly experience various problems while reading in a second or foreign language. Accordingly, it is greatly interesting and challenging for L2 reading researchers to study this phenomenon.

Although there are many earlier studies on L1 and L2 reading, none of them focuses on the specific needs for English reading of veterinary students. This study was conducted to investigate needs and problems in reading academic materials in English of veterinary students at Kasetsart University, and to study their reading strategies. The results of this study may provide course designers with a practical guideline for constructing English courses in academic reading that meet the actual needs of the veterinary students.

Objectives of the Study

1) To investigate the needs for reading academic materials in English of the veterinary undergraduate students at Kasetsart University

2) To explore the problems confronted by the students when reading academic materials in English

3) To probe the strategies used by the students in reading academic materials in English

Research Questions

1) Do the vet students need to read English academic texts? To what extent and for what purposes do they need it?

2) What are the major problems of the veterinary students when reading English materials in their discipline?

3) What are the strategies that the veterinary students use when reading English materials in their discipline?

Literature Review

A survey of learners' needs becomes the basis of developing an English for Specific Purposes (ESP) course. Nunan (1990) points out that the first step to improve the ESP course is to conduct needs analysis and to study the students' requirements of language skills. According to Brindley (1989), needs analysis is now widely accepted as a fundamental principle of program design which is necessary for the specification of language learning objectives.

1. A Review of Needs Analysis Frameworks

Needs analysis can be categorized into two frameworks: Target Situation Analysis (TSA) and Present Situation Analysis (PSA).

1.1 Target Situation Analysis (TSA)

Target Situation Analysis (TSA) is viewed as an analysis of learners' English needs in occupational or educational settings and concentrates on the learners' needs at the end of the course (Robinson, 1991). Hutchinson and Waters, (1987) consider the target situation in terms of necessities, lacks and wants. Necessities are what the learners have to know to function effectively in the target situation whereas lacks are the gap between the target proficiency and the existing proficiency of the learners. Wants refer to the learners' perceptions about their necessities and lacks.

1.2 Present Situation Analysis (PSA)

Present Situation Analysis (PSA) tries to establish what the students are like at the beginning of the language course. PSA also aims to investigate the students' strengths and weaknesses in order to design an English course that suits their language proficiency (Hutchinson and Waters, 1987).

In this study, the questionnaire was based on the TSA framework in terms of necessities and lacks. In addition, needs analysis instruments proposed by Nunan and Lamb (1996), a survey of general learner needs and a language contact survey, were applied to the construction of the questionnaire.

2. Problems in ESL and EFL Reading

Li and Munby (1996) suggests that the major problem in academic reading is the gap between what L2 readers know and what native speakers know in relation to the language and the content of the text written, as nearly all authentic texts are for native speaking readers. The research carried out by Cohen et al (1979) indicate that non-native readers of English texts in sciences and economics are often faced with a problem in synthesizing information across sentences and paragraphs.

One of the important problems in reading is that many non-native readers attempt to read word by word although they are able to read effectively in their L1 (Eskey and Grabe, 1988). This can build up significant barriers to their reading comprehension. Furthermore, readers of L2 often look up the meanings of unknown words in dictionaries, which is more likely to disrupt their reading process (ibid.).

Additionally, Carrell (1988) reports that insufficient background knowledge causes reading difficulties. L2 readers may not adequately acquire a particular schema or background knowledge. The reason for this is that the schema is specific to some cultures and is not part of the readers' background.

3. Reading Strategies for Non-Native Readers

Pritchard (1990, cited in Urquhart and Weir, 1998) refers to a reading strategy as a deliberate action that readers take to enhance their reading comprehension. Nuttall (1996) classifies reading strategies into two groups: word attack skills and text attack skills. The former involves the use of structural information to assign meaning to a word, gaining a rough idea of a word's meaning from the context in which it occurs, and making the best use of the information in the dictionary. The latter is composed of understanding syntax, recognizing and interpreting cohesive devices, recognizing functional value, recognizing text organization, recognizing the presuppositions underlying the text, recognizing implications and making inferences, and predicting

Jordan (1997: 143) summarizes strategies, skills and sub-skills necessary for English reading. They consist of prediction, skimming (reading quickly for the main idea or gist), scanning (reading quickly for a specific piece of information), distinguishing information (factual and non-factual information, relevant and irrelevant information, ideas and examples, etc.), drawing inference and conclusions, deducing unknown words, understanding graphic presentation (data, diagram, etc.), and understanding text organization and linguistic/semantic aspects.

In this study, the questionnaire used to gather data on L2 reading strategies was based on the assumptions of Nuttall (1996) and Jordan (1997).

Methodology

1. Subjects

Subjects were 100 third-year veterinary students at Kasetsart University in the 2008 academic year, comprising 35 male students and 65 female students. Among the population, the third-year students were regarded the most appropriate to be the subjects in this study. The reason for this is that the third-year students have to take the pre-clinic class which requires them to read many English texts in veterinary medicine. As non-native learners, they might encounter difficulties in reading those texts.

2. Data Collection

The main instrument employed to evaluate needs and problems in English reading of the veterinary students as well as their use of reading strategies was a questionnaire. The researcher constructed the questionnaire, based on ESL reading materials and an interview with some of the third-year veterinary students. The first draft of the questionnaire was revised by an expert in the area of ESL reading. It was then tried out to ensure that the subjects understood and interpreted the questions in the same way as what the researcher expected. In the questionnaire, the subjects were required to specify their answers on a five-point Likert Scales.

Besides, the researcher interviewed three subjects to obtain further information on the topics being investigated and also to ensure the results derived from the questionnaire survey. They were first asked to read two excerpts from different veterinary texts provided by the researcher. Next, the interview, which covered problems in reading the given texts and their reading strategies, was conducted and recorded on an audiotape.

3. Data Analysis

In the questionnaire survey, the subjects were asked to rate their answers on a five-point Likert scale. The responses were then computer-coded by the SPSS program. The statistical devices used for data analysis included frequency distribution, percentage (%), arithmetic mean ($\overline{X}$), standard deviation (S.D.) and Cronbach's Alpha Coefficient (CC). The criteria used to interpret the means were as follows:

Scale		Mean Range
5	Most	4.51 - 5.00
4	A lot	3.51 – 4.50
3	Moderate	2.51 – 3.50
2	A little	1.51 – 2.50
1	Least	1.00 – 1.50

In addition, data from the interview was transcribed and translated into English. The findings were then organized into coherent categories and were finally interpreted.

Findings and Interpretations

Questionnaire

The questionnaires were distributed to 100 third-year veterinary students at Kasetsart University. The response rate was 90%.

Table 1 presents the subjects' needs for reading English academic materials. This responds to the first question "To what extent do the veterinary undergraduate students at Kasetsart University need to read English materials in their discipline?" In the questionnaire, the researcher intended to cover both the materials in the subjects' discipline and those in other disciplines in order to survey what types of materials they needed to read and the level of their needs.

Table 1 Veterinary Students' Needs for Reading Academic English Materials

Items	$\overline{X}$	S.D.
1. Veterinary textbooks	4.57	0.64
2. Textbooks in other disciplines	3.36	0.99
3. Veterinary research articles	4.31	0.80
4. Research articles in other disciplines	3.43	1.12
5. Veterinary journals	3.99	0.87
6. Journals in other disciplines	3.31	1.11
7. Veterinary research reports	4.13	0.80
8. Research reports in other disciplines	3.29	1.05
9. Magazines	3.40	0.97
10. Newspapers	3.33	1.05
Average Scores	3.71	0.94

It can be seen from Table 1 that the subjects needed to read English academic materials. Veterinary textbooks had the highest mean ($\overline{X}$ = 4.57), followed by veterinary research articles ($\overline{X}$ = 4.31), veterinary research reports ($\overline{X}$ = 4.13), and veterinary journals ($\overline{X}$ = 3.99) respectively, However, materials of other disciplines were moderately necessary.

Table 2 reports the subjects' purposes for reading English academic materials. They need to read those materials in order to serve the following purposes.

Table 2 Veterinary Students' Purposes for Reading Academic Materials in English

Items	$\overline{X}$	S.D.
1. To prepare for examinations	3.89	0.92
2. To gain information for doing a report	4.53	0.60
3. To gain information for conducting a seminar paper	4.58	0.58
4. To clarify some points that are difficult to understand	3.67	0.99
5. To gain further knowledge	3.51	0.96
Average Scores	4.04	0.81

According to the table, the subjects had great needs for reading the English academic materials to achieve many purposes. The two main purposes were to gain information for conducting a seminar paper ($\overline{X}$ = 4.58) and to gain information for doing

a report ($\overline{X}$ = 4.53). They also read those materials to prepare for examinations ($\overline{X}$ = 3.89), to clarify some points that are difficult to understand ($\overline{X}$ = 3.67), and to gain further knowledge ($\overline{X}$ = 3.51).

Table 3 reveals the problems in reading English academic materials of the subjects. This part aims to answer the second research question "What are the important problems of the veterinary students when reading English materials in their discipline?"

Table 3 Veterinary Students' Problems in Reading Academic Materials in English

Items	$\overline{X}$	S.D.
1. Problems of general terms	3.92	0.90
2. Problems of technical terms	3.88	0.93
3. Problems in choosing the appropriate meaning	3.87	0.97
4. Problems of the complexity of English sentence structures	3.72	0.96
5. Problems in reading texts due to insufficient grammatical knowledge	3.38	1.04
6. Problems in reading texts due to the lack of skimming skill	3.61	1.07
7. Problems in reading texts due to the lack of scanning skill	3.61	0.99
8. Problems in translating texts	3.57	0.92
9. Problems in identifying a main idea from texts	3.49	0.96
10. Problems in summarizing texts	3.51	0.89
11. Problems in ordering the sequence of information	3.42	0.94
12. Problems in identifying fact and a writer's opinion	3.39	1.05
13. Average Scores	3.61	0.96

Table 3 shows that the overall subjects had problems at a high level ($\overline{X}$ = 3.61) when they read English academic materials. They had great problems in understanding the meaning of general terms ($\overline{X}$ = 3.92) and technical terms ($\overline{X}$ = 3.88), problems in choosing the appropriate meaning ($\overline{X}$ = 3.87), and problems of the complexity of English sentence structures ($\overline{X}$ = 3.72), respectively. Other important problems included problems in reading texts due to the lack of skimming skill and problems in reading texts due to the lack of scanning skill with equal mean ($\overline{X}$ = 3.61), problems in translating texts ($\overline{X}$ = 3.57), and problems in summarizing texts ($\overline{X}$ = 3.51) respectively. Nevertheless, English grammar was the least serious problem for the subjects ($\overline{X}$ = 3.38).

Table 4 displays the reading strategies used by the subjects. This part responds to the last question "What are the strategies that the veterinary students use when reading English materials in their discipline?"

Table 4 Veterinary Students' Use of English Reading Strategies

Items	$\overline{X}$	S.D.
1. Setting a purpose for reading	3.62	0.80
2. Using prior knowledge	3.84	0.81
3. Previewing the text before reading	3.44	0.90
4. Checking whether text content fits a reading purpose	3.76	0.80
5. Skimming to note text organization	3.72	0.75
6. Using text features (e.g. tables, graphs, diagrams)	3.67	0.85
7. Using typographical aids (e.g. italics, bold)	3.64	0.88
8. Predicting what the text is about	3.61	0.76
9. Checking if prediction is right or wrong	3.44	0.80
10. Checking understanding when conflicting information is come across	3.48	0.80
11. Reading slowly and carefully	3.58	0.82
12. Trying to stay focused on reading	3.57	0.82
13. Adjusting reading rate	3.71	0.81
14. Pausing and thinking about what is read	3.56	0.94
15. Critically evaluating the information presented in the text	3.68	0.75
16. Re-reading for better understanding	3.76	0.81
17. Guessing the meaning of unknown words from the context	3.91	0.74
18. Reading aloud when text becomes hard	3.13	1.01
19. Consulting a dictionary to look up the meanings of unknown words	4.03	0.95
20. Taking notes while reading	3.31	0.91
21. Highlighting important information / underlining or using highlighters	3.93	0.89
22. Summarizing what is read	3.49	0.96
23. Discussing reading with others, e.g., lecturers and classmates	3.54	0.77
24. Average Scores	3.63	0.84

From Table 4, it can be concluded that the subjects highly used twenty-three strategies to cope with the problems in English reading ($\overline{X}$ = 3.63). The eight prevalent strategies consisted of consulting dictionary to look up the meanings of unknown words

($\overline{X}$ = 4.03), highlighting important information by underlining or using highlighters ($\overline{X}$ = 3.93), guessing the meaning of unknown words from the context ($\overline{X}$ = 3.91), using prior knowledge ($\overline{X}$ = 3.84), checking how text content fit a reading purpose and re-reading for better understanding ($\overline{X}$ = 3.76), skimming to note text organizations ($\overline{X}$ = 3.72), and adjusting reading rate ($\overline{X}$ = 3.71), respectively. On the other hand, the strategy that they employed the least was reading aloud when the text became difficult to read ($\overline{X}$ = 3.13).

Interview

The results drawn from the interview indicated that the subjects needed to read reports, journals, textbooks and research abstracts in the field of veterinary medicine. The major purposes for reading these materials were to do reports, obtain further knowledge and deepen understanding of the lessons.

According to the interview, the most serious problem of the subjects was that they were unable to understand unfamiliar general vocabulary. Furthermore, the subjects largely encountered difficulties in understanding complex sentences.

The interview also revealed that the subjects generally consulted a dictionary to look up the meaning of unknown words. Without a dictionary, they used the context to guess the meaning. To interpret complex sentences, they separated embedded clauses from the sentence so that the bare structure was clarified. Furthermore, the subjects simplified complex sentences by translating them from English into Thai.

One important strategy for reading the texts was the use of background knowledge which helped the subjects guess the meanings of unknown words and facilitate understanding of what they read. The other strategies that they used to improve their text comprehension were circling key words, underlining important information and summarizing each paragraph.

Discussions and Conclusions

The findings of the questionnaire survey and interview showed that the subjects highly needed to read various types of English materials in veterinary medicine, including textbooks, research articles, research reports, and journals. According to the results drawn from the questionnaire, the main purposes for reading these materials were to gain information for

conducting a seminar paper, doing a report and to prepare for examinations. On the other hand, the interview demonstrated that the subjects generally read the academic materials to acquire information for their reports, broaden their knowledge and deepen understanding of the lessons.

Nevertheless, the subjects faced a lot of problems in reading the English academic materials. Interpreting general terms were perceived as the most serious problems, followed by problems of technical terms. This is consistent with Anderson (1999) who remarks that vocabulary deficiency can cause difficulties in comprehending texts. The findings revealed that the key solution to these lexical problems was consulting a dictionary. The subjects mostly consulted a dictionary when they came across unfamiliar words. Meckhayai (1992) reinforces that a dictionary is the most valuable tool for readers who need to read textbooks, or other materials containing technical language and difficult words. However, the subjects' frequent use of a dictionary is incompatible with the results concerning the reading problems. Most subjects confronted the difficulties in understanding general and technical terms even though they usually find word meaning from a dictionary. It is possible that they did not know how to employ this tool effectively. This might also lead them to a problem in selecting an appropriate meaning of words with various meanings.

The other strategy used by the subjects to reduce their lexical problems was guessing the meaning of unknown words from the context. The subjects, as non-native speakers, were more likely to have difficulties with English words. Therefore, one effective strategy for solving the lexical problems is the use of linguistic knowledge as a clue to the meaning of unfamiliar words.

Another problem in understanding texts arose from the complexity of English sentence structures. Nuttall (1996) remarks that the complex sentence structures can block comprehension although the reader knows what words mean.

Regarding how to interpret complex sentences, the subjects divided embedded clauses from the sentence to clarify the main structure. This result is in line with the technique of Nuttall (1996) who suggests that the optional parts of the sentences be removed to make the bare structure clear.

To sum up, the most serious problem that the subjects encountered while reading academic English materials was that they were unable to understand the meanings of general terms. To cope with this problem, the subjects utilized a dictionary regarded as an effective tool for looking up the meanings of unfamiliar words.

Implications of this Study

The present study explored the needs for reading academic English materials of the veterinary students at Kasetsart University and their problems in reading, as well as their reading strategies. The results of this study provide course designers with useful guidelines for designing teaching methods and classroom activities, as well as suggestions for designing reading materials and course content which fulfill the veterinary students' actual needs.

Recommendations for Further Studies

There should be a parallel study which investigates the difficulties with English reading and reading strategies of veterinary students at other universities in Thailand. Further research should also be conducted to probe the problems in reading English academic texts and reading strategies of undergraduate students in other disciplines such as engineering, medical science, nursing science etc. Additionally, qualitative methods which include interview and observation should be employed to gain in-depth data from the participants.

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