

NEEDS ASSESSMENT OF ACADEMIC READING TASKS
AND
CLOSE ANALYSIS OF ACADEMIC READING TEXTS
FOR READING DIFFICULTY AND VOCABULARY PROFILE

A Masters' Thesis

by

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July 2005

*To my beloved husband,
Ümit Şahbaz*

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I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Teaching English as a Foreign Language.

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ABSTRACT

NEEDS ASSESSMENT OF ACADEMIC READING TASKS AND CLOSE ANALYSIS OF ACADEMIC READING TEXTS FOR READING DIFFICULTY AND VOCABULARY PROFILE

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This study explored the Academic reading requirements and text features of first-year, first-term subject area instructors in English-medium departments at Anadolu University. The study was conducted with 20 subject area instructors in English-medium departments at Anadolu University in the 2004-2005 fall term.

Three sets of data were used for this study. First, interviews were conducted with 20 subject area instructors, and questionnaires were distributed in the interviews. Thirteen of the questionnaires from twenty participants were returned and used in this study. In addition, fifteen samples of required textbooks were collected from the same first-year, first-term content course teachers as well as four reading samples from the textbook in the Preparatory School.

The purpose of the questionnaire administered to first-year, first-term subject area instructors was to determine instructors' academic reading and text type requirements of first-year students. The questionnaire consisted of Likert scale items. The follow-up interviews provided insight into teachers' perceptions, experiences and practices related to their academic reading requirements of first-year students. Reading samples from the first-year subject area courses were collected to specify the precise reading requirements of the subject area instructors and to analyze the text features in terms of knowledge structures, readability levels and vocabulary frequencies.

To analyze the data, mean scores, percentages and frequencies were used in the questionnaire; a coding system was used in the interviews; Flesch-Kincaid readability test and Vocabulary Profiler (Nation & Heatley, 1994) were used for analyzing the reading samples. The results reveal that all subject area instructors agree on the necessity of being a proficient reader in order to be successful in subject area courses. Subject area instructors also agree that academic reading abilities and vocabulary knowledge of students should be supported at Preparatory School.

Based on this result adjusting the current curriculum in accordance with the expectations of subject area instructors is recommended.

Key words: English for Academic Purposes (EAP), Academic Reading Tasks, Needs Analysis, Corpus, Corpus-Based Research

ÖZET

AKADEMİK OKUMA HEDEFLERİNİN SAPTANMASI VE OKUMA ZORLUĞU VE KELİME PROFİLİ KAPSAMINDA AKADEMİK OKUMA METİNLERİNİN ANALİZİ

Şahbaz Herkmen, Zehra

Yüksek Lisans, Yabancı Dil Olarak İngilizce Öğretimi Bölümü

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Bu çalışmada, Anadolu Üniversitesi'nde, İngilizce eğitim verilen bölümlerde özellikle birinci sınıf, birinci dönem alan derslerinde öğrencilerden beklenen akademik okuma becerileri ve okuma metni özellikleri saptanmıştır. Çalışma 2004-2005 Güz Döneminde İngilizce eğitim veren bölümlerde görevli yirmi öğretim elemanı ile yapılmıştır.

Çalışmada üç farklı veriye yer verilmiştir. Öncelikle yirmi öğretim elemanı ile mülakat gerçekleştirilmiştir. Mülakat sırasında öğretim elemanlarına anket verilmiştir. Yirmi öğretim elemanından geri dönen on üç ankete ait bilgiler çalışmaya katılmıştır. Ek olarak, birinci sınıf, birinci dönem derslerine ait öğrencilere önerilen ders kitaplarından on beş adet ve Hazırlık Okulu İleri Seviye Okuma Dersi kitabından dört adet metin örneği alınmıştır.

Birinci sınıf, birinci dönem alan bilgisi öğretim elemanlarına verilen anketin amacı öğretim elemanlarının birinci sınıf öğrencilerinden bekledikleri okuma becerileri ve

metin çeşitlerini belirlemektir. Anket Likert ölçeğinde soru tiplerinden oluşmaktadır. Yapılan mülakatlar, öğretim elemanlarının birinci sınıf öğrencilerinden bekledikleri okuma becerilerine ait değerlendirme ve deneyimleri konusunda derin bilgi edinmeyi sağlamıştır. Alınan metin örnekleri birinci sınıf alan bilgisi öğretim elemanlarının öğrencilerden bekledikleri okuma becerilerini saptamak ve bilgi yapıları, okunabilirlik düzeyleri ve kelime sıklıkları açısından analiz etmek amaçlı kullanılmıştır.

Toplanan verilerin analizi anketler için ortalama, yüzde ve sıklık hesaplamaları; mülakatın değerlendirilmesi için kodlama; metin analizi için ise Flesch-Kincaid okunabilirlik testi ve metinlerdeki kelime sıklıklarını belirlemek için Vocabulary Profiler (Nation & Heatley, 1994) programı kullanılmıştır. Çalışmanın bulguları, tüm alan bilgisi öğretim elemanlarının öğrencilerin alanlarında başarılı olabilmeleri için iyi bir okuyucu olmalarının önemi konusunda fikir birliği içinde olduklarını göstermektedir. Alan bilgisi öğretim elemanları Hazırlık Okulu'nda öğrencilerin okuma becerisi ve kelime bilgisi kapsamında desteklenmeleri gerektiği görüşündedirler. Bu sonuç doğrultusunda Hazırlık Okulu'nun şu anki müfredatında ilgili düzenlemeleri yapması önerilir.

Anahtar Kelimeler: Akademik Amaçlı İngilizce, Akademik okuma hedefleri, ihtiyaç saptaması, bir konuya ait yazılı yada sözlü dil örneği, bir konuya ait dil örneğine dayalı araştırma.

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CHAPTER I: INTRODUCTION

Introduction

In an academic context, reading is an essential skill for all students, but particularly for non-native English speaking students. University students are required to research, analyze and synthesize information in academic texts in their fields as a regular part of their courses. The purposes of academic reading are to obtain necessary information, to understand ideas or theories, to recognize authors' viewpoints, and to search for evidence in order to support personal viewpoints (Jordan, 1987). Studies in this field have specified the necessary reading skills and strategies to cope with academic texts, and a number of recent studies have focused on more general skills and strategies for students in academic contexts (Bell, 1998; Hyland, 2002; Johns, 1981; Short, 2000; Sysoyev, 2000). An analysis of texts that students are required to read in academic contexts is essential to understanding more precisely academic language and task needs. In order to meet the academic needs of students, a close analysis of required reading tasks within specific academic contexts is important.

As part of an academic needs analysis process, this study focuses on the close analysis of required tasks and reading texts in an English-medium university in Turkey. The study aims to reveal the expectations of subject area instructors in terms of the level

of academic reading texts and tasks for the undergraduate students at Anadolu University, in Eskişehir, Turkey. In the study, academic texts from targeted faculties were analyzed regarding their readability levels and vocabulary frequency. Identifying these features and characteristics of specialized English, and the skills and strategies required to cope with these types of texts will inform future curricular change (Richards, 2001). Based on the findings, this study aims to compare the text features and expectations of subject area instructors with the current reading syllabus of the pre-university English preparatory school at Anadolu University. The study identifies the gap between the expectations of the subject area instructors in terms of reading requirements and reading skills, and the exit expectations of the pre-university English preparatory school at Anadolu University. The study also identifies the textual differences between the required texts at English-medium departments and the texts used in the Reading Course at the Upper Intermediate Level, which is the primary exit level at the English preparatory school.

Background of the Study

General English programs in English as a foreign language (EFL) contexts are designed to help learners develop the basic skills of reading, writing, speaking, listening, as well as vocabulary and grammar in the target language. Learners are expected to be able to use the target language effectively and efficiently in appropriate contexts. English for specific purposes programs (ESP) developed as curriculum developers considered the actual communication needs of their students in real world contexts (Hutchinson & Waters, 1987). Bell (1998) defined English for academic purposes (EAP) as a specific branch of ESP. The purpose of EAP is to help students develop their

academic skills and to provide knowledge of academic English in order to help them achieve success in their fields (Short, 2000).

Reading constitutes a major part of academic studies. Grabe (1991) defines reading in general as a complex information processing skill in which the reader interacts with the text in order to comprehend it and create a meaningful context. The reader is the active problem solver who decides and uses appropriate skills and strategies for effective comprehension (Silberstein, 1994). Although reading is a receptive skill, the reader's task is to be active and think critically. Grabe and Stoller (2002) present the purposes of general reading as reading to search for simple information, skim quickly, learn from texts, integrate information, search for information for writing, critique texts, and read for general comprehension. In order to achieve these purposes, learners are required to practice basic reading skills and strategies such as specifying a purpose for reading, predicting the content, checking predictions, connecting text to background knowledge, summarizing information, making inferences, and reflecting on what has been learned from the text (Grabe & Stoller, 2002; Jordan, 1997; McWhorter, 1994).

These purposes and strategies are also included in EAP reading. Before specializing in EAP, EFL learners receive basic General English language training in reading skills. Although language learners have competence in reading some texts in the target language, they may feel frustrated in reading more academic and technical English (Carrell, Devine, & Eskey, 1995). Many foreign language learners have comprehension problems with academic texts despite their background knowledge and reading experience.

Vocabulary is one problematic aspect for learners in second language reading. Adequate vocabulary knowledge is an essential requirement in reading comprehension (Nurweni & Read, 1999). Laufer and Sim (in Nation, 2001) suggest that one of the greatest needs of foreign language learners is sufficient vocabulary, compared to subject matter knowledge or syntactic rules. Learners need to be familiar with the vocabulary in the text in order to comprehend it. To illustrate, being able to understand unsimplified texts requires at least 3000 high frequency words (Nation, 1990). Thus, learners need to know a large number of words to cope with academic reading texts. However, some words that frequently appear in texts may be more beneficial for learners than other words (Nation, 2001). Regarding the needs of students in EAP, Coxhead's (2000) Academic Word List (AWL) can be a base from which to set the vocabulary expectations, goals and to select the frequent vocabulary items that would help learners to comprehend academic texts.

Identifying the problems and needs of students are the concerns of curriculum developers in an EAP program. Since different types of students have different language needs, the content of the course and the program should correspond with student needs (Richards, 2001). Analyzing academic texts and discovering the expectations of the content teachers can help identify these specific needs relating to academic reading comprehension. Cohen, Glasman, Rosenbum-Cohen, Ferrara, and Fine (1995) report that rhetorical devices such as complex structure and technical vocabulary items affect students' reading comprehension. The comprehension problems of the students can be better handled in the courses if these requirements can be clearly identified. In this study, an analysis of readability levels and vocabulary frequency in actual academic

texts will help to identify potential problems of students. One of the outcomes of the analysis is to be able to have enough knowledge to familiarize students with the specifics of academic texts in pre-university preparatory classes.

By identifying the specific skills and strategies that are necessary to help students comprehend the texts they will have to read, instruction will be more fruitful (Cohen et al, 1995). However, the expectations of subject area instructors might vary for different disciplines. In that case, data on the required tasks by the content teachers will be gathered from different instructors as the second phase of the needs assessment in this study. Brown (1995) emphasizes that real opinions of the participants are an important source for information. Discovering the expectations of the content teachers on required tasks constitutes a fundamental part of the needs analysis process. The consistency between the interviews and the data analysis based on the interviews can be checked with questionnaires that are practical and effective (Brown, 2001; Richards, 2001). The collected information from the interviews identifies the necessary skills and strategies that students need to achieve.

Statement of the Problem

In an academic context, reading is an important skill because students are expected research, analyze and synthesis texts for comprehension, analysis, and synthesizes. Students are also expected to use required information effectively by employing cognitive and metacognitive skills such as using the information they have gathered in reading in discussions to support a point or to relate the information to real life practices. In English for Academic Purposes (EAP), a number of studies on academic reading have been conducted for graduate students in English as a second

language (ESL) environment (Hyland, 2002; Johns, 1981; Sowden, 2003). These studies emphasize the needs of the language learners in reading academic texts, and they present the necessary skills and strategies for the students in order to cope with the reading tasks. However, studies that aim to discover the academic reading needs of undergraduate students in English as a foreign language (EFL) context are limited (Arik, 2002; Guler, 2004). Required academic reading skills and necessary academic needs in an EFL environment for undergraduate students need to be identified to inform pre-university preparatory schools in Turkey. These academic needs are context bound. In an EFL environment, the required tasks, skills and strategies may differ from those in an ESL environment. These needs should be analyzed regarding the specific context and the participants.

Anadolu University pre-university English preparatory school (AU EPS) has included academic reading skills in the curriculum corresponding to the aim of the program and the academic needs of the students. However, as a part of the curriculum and the needs assessment, the actual reading skills expected of learners by content teachers in different departments need to be clearly identified. Moreover, the reading texts studied in different departments should be analyzed regarding readability levels and vocabulary frequency. The findings of this study will be used to inform curriculum developers and to revise the objectives, materials and the assessments in the program. The program should be relevant for students and their needs in the next step of their academic study.

Research Questions

1. What are the academic reading requirements of the first-year subject area instructors in different departments of Anadolu University (AU)?
2. What are the discourse types, readability levels and vocabulary frequency of academic texts that are required by the first-year subject area instructors in different departments of AU?
3. Do the academic reading requirements, discourse types, readability levels, and vocabulary frequency of academic textbooks required by the first year subject area instructors in targeted departments at AU match the exit reading requirements of students in Upper Intermediate level of English Preparatory School (EPS)?

Significance of the Study

The findings of the study may first be useful for English language teachers in preparatory school programs or working on curriculum development or syllabus design for academic reading courses in preparatory schools in Turkey. The purposes of needs analysis in EAP are basically to discover what language skills a learner needs in order to achieve particular tasks and perform particular roles, to identify the gap between students' current proficiency and target proficiency levels, to discover if the selected materials are appropriate for the level of the students and whether the materials correspond to the needs of the students (Jordan, 1997). In addition, identifying clearly what students need to learn may be beneficial for the pre-university preparatory school students. Learners might become more familiar with reading texts at the same difficulty levels and texts that include high frequency vocabulary items in required texts in their

fields. Moreover, students may have the chance to become familiar with anticipated text types and tasks and use the skills required for effectiveness in the future.

The findings of the study may help AU EPS in informing ongoing curriculum development processes. The goals, objectives, materials and assessment types may be revised to reflect the actual expectations of the content teachers and the text types that are studied in the departments. This is important because the mission of AU EPS is to provide basic academic language skills to the students.

Key Terminology

The following terms are used repeatedly throughout this study:

English for Academic Purposes (EAP): EAP is a sub-branch of English for specific purposes, and based on the language needs of learners in academic settings.

Academic Reading Tasks: In academic contexts, students are required to perform the following tasks: research, analysis, synthesis and integration of knowledge with other skills in their content areas by reading academic texts (Grabe & Stoller, 2002; Alvermann & Phelps, 2002).

Needs Assessment: Needs assessment refers to gathering and examining the required information systematically to meet the learner needs in a specific condition.

Corpus: A collection of written or spoken language on a specific subject.

Corpus-Based Research: The use of a large, representative electronic database of spoken or written texts (the corpus), and the use of computer-assisted analysis techniques (Biber & Conrad, 2001).

Conclusion

In this chapter, a brief summary of the issues related to academic reading skills, the statement of the problem, research questions, and the significance of the study were presented. The second chapter is a review of literature on English for Academic Purposes (EAP), needs assessment and corpus linguistics, academic reading skills, and vocabulary in reading. In the third chapter, the methodology of the study is presented. In the fourth chapter, the procedures for data analysis and the findings are presented. In the fifth chapter, the summary of the results, implications, recommendations, limitations of the study and suggestions for further research are stated.

CHAPTER II: LITERATURE REVIEW

Introduction

The aim of this study is to investigate the required academic reading tasks assigned by subject area teachers in English-medium classes at Anadolu University. The text analysis is based on readability levels, vocabulary frequency and knowledge structures from different targeted academic areas at Anadolu University. In this chapter, the researcher will set up a framework to provide information on English for Academic Purposes (EAP), the purposes and procedures of needs analysis, academic reading skills, and vocabulary in academic contexts.

First, EAP will be defined by emphasizing its difference from General English. The chapter also discusses the purposes and procedures of needs assessment including text analysis based on readability levels and vocabulary frequency, and the use of questionnaires and interviews to gather data. Information on academic reading is then presented in the second section including sub-sections on reading skills and strategies. The purposes and reading problems of second language learners are also included. Within academic reading skills, knowledge structures in reading texts are defined. The final section presents information on the importance of vocabulary for successful academic reading in EAP.

English for Academic Purposes (EAP)

English for Academic Purposes (EAP) is a specific branch of English for Specific Purposes (ESP). The academic context of EAP and the related needs of the learners differentiate it from general English. EAP facilitates learners' academic studies in English (Jordan, 1997). The aims of the learners in an EAP context are to gain fluency in the conventions of English language academic discourses to understand their fields and conduct their learning (Hyland & Hamp-Lyons, 2002). As a learner-centered approach, ESP is concerned with specified language use and the process of language learning (Hutchinson & Waters, 1987). Considering the needs of the students, EAP identifies the specific language features, discourse practices and communicative skills, and the subject matter needs of the target groups (Hyland, 2002). Carlin (2005) summarizes the implementation of an EAP program as follows:

The implementation of an EAP program involves needs assessment, evaluation, analysis of student goals and skills, and a determination of the particular language features, vocabulary, organizational structures, discursive patterns, and genres associated with the varieties of English found in university texts and classrooms.

EAP diverges from General English in linguistic features and genres used. Flowerdew and Peacock (2001) state that genres in academic subject areas are different from those in General English. Academic genres include academic lectures, academic textbooks and research articles (Carlin, 2005). Academic language also has linguistic differences from general English in terms of structure and vocabulary (Carlin, 2005; Richards, 2001). Finally, because of the different task requirements in EAP, the students

need to be exposed to particular tasks in their subject areas. General English language proficiency and background knowledge of students may be insufficient when they encounter EAP (Flowerdew & Peacock, 2001).

Needs Analysis in EAP

Needs analysis in English Language Teaching (ELT) discovers the language features that students need in order to use the target language. Once identified, the needs are addressed in the curriculum. A qualified curriculum should be based on an analysis of learners' needs (Richards, 2001). Needs analysis is a process of determining the needs of the learners, particularly regarding required language features, and arranging these needs according to the program or individual priorities (Richards, Platt & Weber, 1985).

Gathering information about the needs of the learners enables the development of goals and objectives which can also help to improve tests and materials, teaching activities and evaluation strategies used in a course (Brown, 1995). Needs analysis is, therefore, an indispensable part of systematic curriculum development. These target needs of the students include necessities, lacks and wants. Necessities are the items that learners need to know to be able to function in the target language. Lacks refer to the gap between what learners know already and what they are supposed to learn. It is important to be aware of the background of the learners in order to decide what the learners' lack of. Finally, wants are the wishes of the learners on what to learn (Hutchinson & Waters, 1987; Flowerdew & Peacock, 2001).

In EAP, needs analysis is a necessary component while designing a syllabus, tasks, materials and evaluation in academic contexts. Flowerdew and Peacock (2001) define the approach to EAP needs analysis as a search for the answers to why the

learners are attending an English course, in what situations they need English and what they must do with English in the situations they are involved.

In the process of needs analysis, primarily the purposes of needs analysis are clarified. The purposes of needs analysis in EAP are basically finding out what language skills a learner needs in order to achieve particular tasks and perform particular roles, identifying the gap between students' current proficiency and target proficiency levels considering expected language features, discovering if the selected materials are appropriate for the level of the students and whether the materials correspond with the needs of the students or not (Jordan, 1997). The framework by Hutchinson and Waters (1987) for analyzing learning needs of students in EAP focuses on why the learners are taking the course, how they learn, the available resources, who the learners are and where and when the course takes place.

In order to perform needs analysis, five systematic steps are suggested by Brown (1995), Graves (2000) and Hutchinson and Waters (1987). First, making basic decisions about the needs analysis helps researcher to figure out deciding what information to gather and why. The next step is deciding on the best way to gather it: when, how and from whom to gather the information. Finally, in order to use the gathered information, it is necessary to interpret the information, act on the information and evaluate the effect and effectiveness of the action.

Initially, the participants of the needs analysis need to be decided. Students in a language program are the main focus compared to other groups of participants in a needs assessment. They are the "the target group" which refers to people about whom information will be collected. Language needs are determined based on the needs of the

students in the target language (Brown, 1995). The target group can also be policy makers, ministry of education officials, teachers, academics, vocational training specialists considering the aim and the function of the needs assessment (Richards, 2001). The other group among the participants is the audience that includes all people who will eventually be required to use the analysis. This group usually consists of teachers, program administrators and governing bodies or supervisors in the bureaucracy above the language program. The third group is the needs analysts who are the members of the faculty or consultants brought together with the purpose of conducting the analysis. This group will probably be responsible for identifying the other groups in the process.

Professors who teach subject area courses can be considered as the target group for an EAP needs analysis. Carrell and Carson (1997) state that the tasks and activities in different subject areas are so varied that texts and reading assignments are shaped by individual disciplines, courses, professors and students. Therefore, professors from different disciplines are the basic sources to provide necessary information in order to identify academic tasks, and the skills needed to achieve these tasks. In order to gather data on these requirements, interviews, questionnaires, and close text analysis might be the most efficient methods. The expectations of the content teachers regarding academic reading tasks can be discovered using interviews and a questionnaire to check the interpretations from the interviews (Brown, 2001).

Questionnaires are commonly used instruments in research as obtaining and analyzing the information through them is easier compared to interviews (Richards, 2001). They are written instruments with a series of questions or statements that are

answered by writing or selecting among existing answers (Brown, 2001). Questionnaires are practical to use, as they involve a large number of questions to gather required information, and reliable, as they can be evaluated statistically (Wallace, 1998). A disadvantage of questionnaires is that the information obtained can be too superficial and needs to be supported by some other type of instrument (Brown, 1995).

Cohen, Kirschner and Wexler (2001) present four aspect of needs for EAP courses as focusing on linguistic forms, reading comprehension strategies, typical academic genre/rhetorical forms and criterion tasks. For determining linguistic forms, a close analysis of texts focusing on structure and vocabulary frequency can provide information on the characteristics of the specified language in academic contexts (Richards, 2001). To detect the structural features of a text, readability levels determined by the average number of words per sentence or syllables per word provide information (Taylor & Francis, 2001). For the purpose of identifying the vocabulary needs of learners in EAP, the Academic Word List by Coxhead (2000) and high frequency words are beneficial references. These lists cover the common lexical items in different subject areas and frequent words in general that an EAP learner needs to know to comprehend an academic reading text (Nation, 2001). Both grammatical and lexical features of texts in an academic context can be determined by conducting corpus-based research.

Corpus-Based Research

A corpus is a large and principled collection of natural texts (Biber, Conrad & Reppen, 1998). In other words, a corpus is a collection of written or spoken language on a specific subject. In corpus-based research, a representative electronic database of spoken or written texts, or both (the corpus) is analyzed through the use of computer-

assisted analysis techniques (Biber & Conrad, 2001; Biber, Conrad & Reppen, 1998; Keck, 2004). A corpus provides natural examples of the grammatical and lexical features of a context. Corpus-based research presents quantitative results of the lexical and structural features of a context (Biber & Conrad, 2001).

The essential characteristics of corpus-based analyses are presented in Biber, Conrad & Reppen (1998) as follows: Corpus-based research is empirical, based on the analyses of the actual patterns of use in natural texts: a corpus. In corpus-based research, computers are used interactively as they provide reliability and record keeping. Moreover, corpus-based research includes both quantitative and qualitative analyses. The goal of corpus-based research is not simply to report quantitative findings, but to explore the importance of these findings for learning about the patterns of language use. Core areas of linguistic structure, such as lexicography and grammar, are analyzed through corpus-based research (Biber, Conrad & Reppen, 1998). To illustrate, a corpus-based research presents information about the most common usages, the frequency of words, and the contexts in which words and meanings are most commonly found.

The outputs of corpus-based research can be used in language teaching including materials development, curriculum design, teaching methodology and teacher training (Keck, 2004). For instance, the study by Coxhead (2000) investigated the frequency of words in academic corpus made up of text samples from different academic fields. The results of this study could be used to set the vocabulary goals of language learners in EAP by determining the most frequent words that EAP students deal with in academic contexts.

Academic Reading

Reading constitutes an important role in EAP. Primarily, EAP readers need to develop competency in academic English and reading skills through direct instruction to meet the challenges of subject matter in English. Cohen, Kirschner, and Wexler (2001) present the main goal of an EAP course as being to provide the students with the skills and strategies needed to meet the English reading requirements for their academic courses. During their educational careers, students need to read a great deal from many sources in order to learn about their fields and complete required tasks. Coady (1993) states that academic literacy must be explicitly taught as students do not acquire naturally in contrast to speaking or listening abilities at this higher, more literate level. Moreover, reading is an active process. For comprehension and efficient reading, students need to be taught reading strategies (Grabe, 1991).

Especially in an EFL environment, students frequently do not read efficiently. Linguistic and processing differences, individual and experiential differences, and finally socio-cultural and institutional differences distinguish reading in first language (L1) from second or foreign language (L2) (Grabe & Stoller, 2002). These differences might be challenging for students to cope with. EFL students read at a slower rate with lower comprehension when compared to native learners of the target language (An, 1992). Kern (2000) reviews the literature on L1 reading and L2 reading. Kern concludes that L2 reading is less efficient than L1 reading and that L1 reading abilities are unable to be transferred into L2 easily and effectively. Because of the difficulty in L2 reading comprehension, students need explicit instruction in academic reading skills.

Academic Reading Skills and Strategies

Academic reading skills require the reader first to recognize words and grammatical structures. Later these items allow the reader to comprehend and interpret the text (Silberstein, 1994). In other words, readers first look at the bottom-up and then top-down processes. Bottom-up processes include lexical access, syntactic parsing, and semantic proposition formation, and working memory activation (Grabe & Stoller, 2002). Lexical access refers to the familiarity of the vocabulary items to the reader. For a reasonable comprehension of a reading text, the reader needs to know about 95% of the words in a text (Carkin, 2005; Grabe & Stoller, 2002; Nation, 2001).

Top-down processing includes text model of comprehension, situation model of reader interpretation, background knowledge use and making inferences, and executive control processes. When students read, both lower-level processes and higher-level processes are activated. The difficulty level of the texts in terms of the processes and the proficiency levels of the reader need to be considered when choosing the appropriate texts for EFL students (Grabe & Stoller, 2002)

Specifically in English for Academic Purposes (EAP), the ability to read academic texts is fundamental (Levine, Ferenz & Reves, 2000). Students are required to research, analyze, synthesize and integrate the information with other skills in their content areas by reading academic texts (Alvermann & Phelps, 2002; Grabe & Stoller, 2002). The main purposes of academic reading according to Grabe and Stoller (2002) are reading to search for simple information, to skim quickly, to learn from texts, to integrate information, to transfer the information to other skills such as speaking and writing, to critique texts, and for general comprehension. Readers should be aware of

what to expect from academic reading texts. Jordan (1997) presents the basic reading purposes of EAP readers as being to obtain information, understanding ideas and theories, discover authors' viewpoints, seek evidence for their own point of view and transfer it into other skills.

In order to comprehend reading texts, learners need to develop the necessary skills and strategies. Reading skills refer to linguistic processing abilities such as word recognition and syntactic processing. Reading strategies are the abilities that are used by the reader to comprehend the text. Some reading strategies include specifying a purpose for reading, previewing the text, posing questions about the texts, summarizing information, making inferences, connecting one part to another, and checking comprehension (Grabe & Stoller, 2002). Successful readers consciously or unconsciously use skills and strategies that assist them to comprehend the text (Aebersold & Field, 1997). To illustrate, efficient readers make predictions about the content of the reading passage by using textual clues, background knowledge and experiences (Silberstein, 1994).

The reader's task is to use the appropriate skills and strategies systematically in order to facilitate comprehension (Silberstein, 1994). To achieve this task, the reader monitors comprehension and develops the level of metacognitive skills that enable the reader to understand the implied information in a text. The reader's knowledge and perceptions of strategies are used to comprehend the text (Anderson, 1999; Aebersold & Field, 2002).

Success in Reading Comprehension

Although reading is traditionally defined as a receptive skill, it requires the reader to be mentally active in order to comprehend the written text and transfer the information gathered effectively into other skills. Reading comprehension is the ability to understand the information in a text and interpret it appropriately. Grabe and Stoller (2002) state that the definition of reading is more than drawing the meaning from the written text and interpreting the information appropriately. Reading ability is an active cognitive and comprehending process, which utilizes many skills for different purposes (Silberstein, 1994; Grabe & Stoller, 2002). Good readers are aware of how they should read and what they should do to improve reading comprehension (Aebersold & Field, 2002).

Even though comprehension is gained by reading the text, the reader may not be able to achieve the expected outcomes. In order to meet the expectations of the instructor, which means achieving the reading tasks, the reader should adjust the reading strategies to specific reading tasks (Aebersold & Field, 2002). The more the tasks and related strategies are specified, the better a reader can comprehend the text (Carson in Belcher & Hirvela, 2001). The reader's purpose in reading the text determines the choice and use of strategies. Therefore, in order to select the strategies for students, target texts needs to be identified.

Good reading requires both language competence and language skills (Dudley-Evans & St John, 1998). Jordan (1997) presents reading skills and sub-skills for EAP. These required reading skills are basically prediction, skimming, and scanning. In addition, distinguishing between factual and non-factual information, important and less

important items, relevant and irrelevant information, explicit and implicit information, ideas, examples and opinions, drawing inferences and conclusions, deducing unknown words are vitally important for students to comprehend texts. Finally, skills like understanding graphic presentations (data, diagrams, etc.), understanding text organization and linguistic/semantic aspects; relationships between and within sentences (e.g., cohesion); recognizing discourse/semantic markers and their function affect readers' comprehension of academic texts.

EAP reading is concerned with grammar, discourse genres, learning tasks, and discourse communities in reading comprehension (Mohan, 1990). The basic factors that affect reading comprehension negatively are structure and vocabulary knowledge. For instance, in order to predict which points or questions the author is going to address, a reader can interpret the author's signals at the level of grammar and vocabulary (McCarthy, 1991).

Teachers can help students comprehend L2 reading texts and achieve required outcomes by defining the difficulty of the text. In order to measure the structural difficulty of a text, simplify the text or choose an appropriate text for a reader, readability formulas are a frequently used source. Readability formulas are derived from word length and sentence length that are easily measurable. Readability formulas base their calculations on two variables; semantic difficulty as measured by word length, and syntactic difficulty as measured by sentence length, that is, by the average number of words per sentence (Report, 2000). Simplifying a text structurally based on the readability is not the only factor that makes comprehension possible. Vocabulary level is also an important consideration. Second language readers need to be familiar with at

least 95 percent of the words in a text in order to read and understand original texts (Nation, 2001).

Mohan (1990) presents the knowledge structures that would help readers figure out the patterns of organization in a text in order to identify the features of the target text types for a genre in a discourse. Knowledge structures are broad and general patterns of the organization of information. The patterns would help reader to comprehend the reading text and achieve the required task. A framework of knowledge structures and some core skills required for these knowledge structures are displayed in Figure 1.

Classification or Concepts	Principles	Evaluation or Value
classifying categorizing defining	explaining predicting interpreting data and drawing conclusions developing generalizations (cause, effects, rules, means-ends, reasons) relating causes and effects experimenting	evaluating judging criticizing justifying preference and personal opinions forming personal opinions
Description	Sequence	Choice or Decision Making
observing describing naming comparing contrasting	plan procedures carry out procedures arrange events in sequence understand time and chronology note changes over time	recommending making decisions recognize issues, problems identify alternate solutions problem-solving

Figure 1.
A Framework of Knowledge Structures and Some Core Skills for them
(Mohan, 1990)

These knowledge structures are not a method but a strategy that teachers can use creatively, and they depend a good deal on teachers being able to take them further, adapt them to their circumstances and develop them in interesting and creative ways (Mohan, 1990). For instance, teachers can familiarize themselves with the knowledge structures in reading texts and the required skills in order to deal with the knowledge structures in teaching to students. This strategy would guide students to comprehend the text easily and effectively.

In addition to vocabulary knowledge and discourse type, there are other factors that affect reading comprehension. The meaning of a text is not simply derived from the synthesis of words in a text (Coady, 1993; Thomson, 1988). Comprehension requires a complex interaction of words, lexical cohesion, rhetorical organization of text, figurative use of language, subordinators, pragmatic considerations, coherence relation, and genre structures. Readers' personal and cultural background knowledge also influence the quality of reading comprehension (McCarthy, 1991; Reynolds, 2002).

In conclusion, these key skills in EAP may help readers to achieve comprehension of the reading texts and to achieve the required tasks in EAP. Learners need to be guided on the required reading skills and text types in order to achieve specific tasks in EAP (Dudley-Evans & St John, 1998). While designing a reading course for EAP, curriculum developers and teachers need to consider the purposes, text types and text features in terms of difficulty levels, required tasks and the necessary reading skills to achieve these tasks.

Academic Vocabulary

Vocabulary as a sub-skill of reading has a vital role in reading comprehension. It is almost impossible to separate reading from word knowledge for fluent reading (Carkin, 2005; Grabe & Stoller, 2002). In defining the difficulty and readability of a text, vocabulary is generally found the most important factor (Chall, 1958; Klore in McCarthy, 1988). Lexical knowledge is a critical necessity to comprehend texts and use the language (Nation, 1990; Nurweni & Read, 1999). The difficulties of lexical items appear to be the most difficult barrier to reading technical texts in the content areas. Cobb and Horst (2001) argue that lexical knowledge is the key component to comprehend the content in specific texts in both L1 and L2.

L2 readers need a large amount of vocabulary in order to read and understand texts in the target language. However, some words might be more beneficial for L2 learners to comprehend texts better (Nation, 2001). Frequency based studies may help to set vocabulary goals for students based on their needs. Nation (2001) presents the importance of academic vocabulary under four headings. First, it is common in a wide range of academic texts rather than non-academic texts. Second, it accounts a substantial number of words in academic texts; for instance the AWL usually accounts for 9% of the text (Nation, 2001). In addition, academic vocabulary is generally not taught unlike subject specific vocabulary. Learners are familiar with the specific vocabulary in their field; however, academic vocabulary is often unfamiliar to them. Finally, language teachers are better able to help students with the academic vocabulary than with subject specific vocabulary. Academic vocabulary is included in all academic texts and a language teacher is able to teach these words in general academic contexts with general

samples. However, subject specific vocabulary requires the subject specific context, which might be difficult for a language teacher to set the context and teach specific vocabulary items within this context.

A recent study on academic lexical items in a text was conducted by Coxhead (2000), based on the earlier descriptions of word lists (West, 1953; Xue & Nation, 1884). In Coxhead's academic word list, the lexical items in texts are grouped as high frequency words, low frequency words, academic words and technical words. The high frequency words (a group of 2000 words) cover the items that are important and cover a large part of a text. Regarding the effects of English vocabulary size on reading comprehension, the most frequent 2000 words comprise approximately 80% of all words in a given English text, and a vocabulary size of the 2000 most frequent words enables learners to have "a good degree of comprehension of a text" (Nation & Waring, 2001). Low frequency words (a group of 1000 words) occur infrequently and constitute a limited part of a text. Academic words (570 words) are the common words of different subject areas in academic context. In academic texts, non-technical words and rhetorical devices in technical written texts may actually cause more difficulty to students (Cohen, Glasman, Rosenbaum-Cohen, Ferrara & Fine, 1988; Li & Pemberton, cited in Thurstun & Candlin, 1998). Students are familiar with the technical words that are frequently used or of Latin origin and cognate in L1 and L2 (Coxhead, 2000).

Learners who are involved in academic study primarily need to develop a large reading vocabulary (Nation, 1990). Obtaining the meaning and achieving academic success depends on having a well-developed academic vocabulary (Corson in Nation, 2001). Academic vocabulary is particularly difficult for students rather than subject

specific vocabulary (Coxhead, 2000). In fact, the vocabulary items with mid-level frequency of occurrence across texts of various disciplines are problematic for students (Thurstun & Candlin, 1998). Students are generally familiar with the terminology in their fields; however, they are not familiar with academic vocabulary in general (Coxhead, 2000), and this causes the failure of students to comprehend academic texts. Nation (1990) states that learners of English as a foreign language need a productive knowledge of at least 3000 high-frequency English words in order to be able to cope with university reading tasks. Knowing frequent words based on the learner needs in a text allows a good degree of comprehension. The two experiments by Magoto, Hubbard, Graney and Mokhatri presented in Coady (1993) emphasize the important and positive relationship between knowledge of high-frequency vocabulary knowledge and reading proficiency.

EAP students basically need to know high frequency words in order to succeed at reading comprehension in the target language. In addition to general high frequency words, academic vocabulary needs to be emphasized for EAP students. High frequency words in an academic corpus were listed in University Word List (UWL) by Nation in 1994, which was revised as the Academic Word List (AWL) by Coxhead in 2000. The academic corpus in Coxhead's study contained 3,500,000 running words from the texts belong to arts, commerce, law and science. Words were selected for the AWL by Coxhead (2000) based on this criterion:

1. Specialized occurrence: The word families included had to be outside the first 2,000 most frequently occurring words of English, as represented by West's (1953) GSL.

2. Range: A member of a word family had to occur at least 10 times in each of the four main sections of the corpus and in 15 or more of the 28 subject areas.
3. Frequency: Members of a word family had to occur at least 100 times in the Academic Corpus. (Coxhead, 2000)

An academic word list should be considered in setting vocabulary goals for language courses, in guiding learners in independent study, and informing course and material designers in selecting texts and developing learning activities (Coady, 1993; Coxhead, 2000; Nation, 2001). While setting vocabulary goals for EAP courses, the AWL is useful to meet the exact needs of the students.

Conclusion

In this chapter, a review of the literature on EAP, needs assessment and corpus-based research, academic reading and academic vocabulary were presented. In the next chapter, information about the methodology of this study is given.

CHAPTER III: METHODOLOGY

Introduction

This study is a needs analysis of reading expectations of subject area instructors in first-year, first-term, English-medium courses at Anadolu University in Eskişehir, Turkey. In order to determine the reading expectations of these instructors, an investigation of required academic reading tasks in the different subject areas was undertaken as well as a close analysis of the readability and vocabulary levels of required academic reading texts and the knowledge structures in these texts from different subject areas. The results of this analysis will be compared with the reading expectations of the intermediate level reading course in the English language preparatory school at Anadolu University (AU EPS). By analyzing the current reading texts and tasks at the intermediate level and comparing them with the results from the analysis of reading tasks in first year subject area courses, the differences and similarities in expectations will be illuminated. Based on this information, informed curricular changes in the reading program in AU EPS can then be implemented. The research questions for this study are as follows:

Research Questions

1. What are the academic reading requirements of the first-year subject area instructors in different departments of Anadolu University (AU)?

2. What are the discourse types, readability levels and vocabulary frequency of academic texts (textbooks) that are required by the first-year subject area instructors in different departments of AU?
3. Do the academic reading requirements, discourse types, readability levels, and vocabulary frequency of academic textbooks required by the first year subject area instructors in targeted departments at AU match the exit reading requirements of students in Upper Intermediate level of English Preparatory School (EPS)?

Setting and Participants

The study was conducted in various English-medium departments at Anadolu University. Anadolu University is a university in which some faculties are fully taught in English, while others offer courses in both Turkish and English. The participants were twenty subject area instructors working in different English-medium faculties at Anadolu University. The first term courses of the first year of study for students were the focus of analysis because they include the first actual academic tasks students encounter immediately after successfully finishing the AU EPS. The faculties, departments, first-year first-term English-medium courses, and the number of instructors in each faculty included in the study are presented in Table 1 below.

Table 1.

English-medium faculties, departments, English-medium courses in first-year, first term courses and the number of subject area instructors interviewed

FACULTY	DEPARTMENT	COURSES IN ENGLISH (1ST Year)	N
Communication Sciences	Public Relations	Business Management	1
Economics and Administrative Sciences	Business Administration (Eng)	Introduction to Economics Mathematics for Economists Financial Accounting	
	Economics (Eng)	Introduction to Economics Introduction to Business Introduction to Sociology Financial Accounting	7
Engineering & Architecture	Chemical Engineering	Introduction to Chemical Engineering	
	Civil Engineering	Introduction to Civil Engineering General Chemistry	
	Computer Engineering	Introduction to Computer Engineering General Chemistry Calculus I	
	Electrical & Electronics Engineering	Calculus I Introduction to Electrical Engineering	
	Industrial Engineering	Introduction to Industrial Engineering General Chemistry	
	Material Science & Engineering	Materials in Practice General Chemistry	9
Fine Arts	Graphic Arts	Introduction to Visual Communication	1
Science	Chemistry	General Chemistry I	1
SCHOOLS			
School of Civil Aviation	Department of Air Traffic Control	Airport and Airport Equipment	
	Department of Aviation Management	Introduction to Civil Aviation	2
Total			20

Note. N: Number of participants surveyed.

To gather data for the study, twenty participants from different departments were interviewed and given questionnaires. Among the twenty questionnaires, only thirteen of them were returned. The distribution of the participants returning questionnaires across the faculties is presented in Table 2.

Table 2

Distribution of Questionnaire Participants Across the Faculties

Faculty	N
Economics and Administrative Sciences	4
Engineering and Architecture	5
Science	1
Fine Arts	1
School of Civil Aviation	2
Total	13

Note. N: Number of participants

In the questionnaire, three questions in Part I dealt with demographic information about the participants. The majority of the participants were assistant professors with 1 to 5 years' experience. It was informally pointed out during the interviews that the participants who conduct English-medium courses had their B.A., M.A. or PhD degrees in either England or the U.S.A. The distribution of the participants in terms of their academic titles and years of experience is displayed in Table 3 below.

Table 3

Distribution of the Participants with respect to their Academic Titles and Experience

Title	N	Experience	N
Lecturer	1	Less than one year	1
Assistant Professor	8	1-5 years	8
Associate Professor	2	6-10 years	2
Professor	2	11-15 years	1
		More than 20 years	1
Total (N)	13	Total	13

Note. N: Number of participants

Instruments and Materials

The purpose of this analysis was to determine precisely the required tasks and text features in each targeted subject area course, as well as the features of the texts

taught in the exit course in the preparatory program. For this aim, questionnaires, interviews, fifteen text samples from subject area textbooks and four samples from EPS Reading Course Book, *Mosaic I*, were used in this study.

Questionnaire

With the aim of gathering the data on the required academic reading tasks and texts, a questionnaire was prepared. The questionnaire used in this study was composed of six parts. Parts A, B and F were open-ended questions, and Parts C, D and E included 4 point Likert Scale items (See Appendices A & B for a copy of the questionnaire and its Turkish translation).

Part A of the questionnaire was designed to collect demographic information about the participants. The items in this section dealt with the participants' faculty, academic title, and teaching experience. Part B of the questionnaire consisted of a single open-ended item requesting information about the English-medium course or courses being taught by the respondent in the 2004 Fall Semester.

Part C was composed of ten items related to describing the required text types in the course, for example, textbook or articles from professional journals. Participants were asked to determine the text types they require by their frequency. Part D consisted of seven items relating to the academic reading purposes that students would need to perform successfully in the given departments in English. Among these purposes, participants were asked to determine the academic reading purposes according to the importance they would give for each.

Part E had two sub-sections. The first sub-section included identifying knowledge structures in academic reading texts for the particular field, and the second

sub-section included identifying difficulties of students might have coping with these knowledge structures. The framework of “knowledge structures” (Mohan, 1990) has been widely used to describe typical kinds of reading from many academic areas. A sample table of these knowledge structures and how they might appear in reading topics from a course in Economics was given in the questionnaire as a sample to clarify it to the participants. This sample presentation is reproduced in Table 4.

Table 4
Knowledge structures and examples (from the questionnaire)

KNOWLEDGE STRUCTURES	
Classifications/Concepts	Types of industry in Eskişehir
Description	Describing a branch of industry in Eskişehir
Sequence	Year by year growth of industrial activity along the industrial framework and detecting the expectations
Principles	Examining the principle of supply and demand to production.
Evaluation	Judging the study process
Choice/Decision	Bringing up the industrial subjects, location and marketing and choosing the appropriate ones.

The participants were asked to check which of these kinds of reading contents are typical of their own academic area and what types of readings were most difficult for students.

Part F, the last part of the questionnaire, was an open-ended section. It called participants to add any comments on the academic reading requirements and learner difficulties that they felt relevant.

The questionnaire was administered in Turkish, with the aim of avoiding any inconvenience arising from language problems. The questionnaire was translated into Turkish by the researcher and then a classmate in the MA TEFL program. The Turkish

translation of the questionnaire was then edited by Assoc. Prof. Engin Sezer from Bilkent University. The feedback was taken into consideration in rewording the items, and in correcting any unclear items. Then the draft Turkish version was informally piloted with an instructor in the Electric and Electronic Engineering Department, Anadolu University to identify items that were not clear and revise them.

Interviews

Interviews were conducted with twenty subject area teachers from five faculties and one school that have English-medium courses in the first-year of instruction. As an interview is interactive, the researcher can direct the interview by asking questions to gather the most relevant answers (Jordan, 1997). The interviews were conducted in Turkish because all the participants were native Turkish speakers. The aim of using Turkish was to avoid any language barrier in communication with the participants and to avoid obscurity. Interview questions were parallel with the questionnaire. Fourteen of the twenty interviews were audio-recorded, and in six of the interviews, the interviewer took notes as the participants preferred not to have the interview recorded.

There were four main interview questions developed by the researcher (See Appendix C for the interview questions). The researcher asked additional follow-up questions based on the responses from the participants. The first question investigated the expectations and requirements of students in reference to academic reading. This question aimed to get a deeper understanding and additional opinions from the participants about their reading expectations. The second question explored to what extent the students were able to fulfill the expectations of the instructors. The question solicited responses such as students' achievement of tasks assigned as homework, exam

questions and in-class participation. Another question investigated the reasons students might fail to meet the expectations of the instructors. In other words, what kind of difficulties were students faced with and how well did they meet the expectations of the instructors. This question was supported by additional questions on perceived student difficulties. To illustrate, one question related to student reading difficulties was whether students had enough academic vocabulary knowledge or background information about the topic to comprehend the text or not. The last question explored whether the instructors did something additional to help students to cope with the reading load. Additional help might be delivering in supplemental handouts, preparing during-reading questions to guide the student while reading, using the board to emphasize important sections, summarizing the text for them, and preparing other visuals such as Power Point slides.

Reading samples from the subject area textbooks were collected immediately after finishing each interview with subject area instructors. Fifteen sample texts from English-medium departments were selected from the course books because according to questionnaire responses, the textbook was the basic reading requirement of students. The samples were selected from the first pages of the first chapters of the textbooks. The reason for this criterion is that students are required to cope with these texts when they pass Preparatory School successfully. These samples from the textbooks are closer to the target point of Preparatory School. Moreover, the first pages of the textbooks would be easier for students compared to further pages. If students are able to understand the texts on first pages, they would probably understand the following pages which might be more difficult.

In order to compare these target texts with the current texts used at Preparatory School, four texts from *Mosaic I*, Upper Intermediate level Reading Course book, were selected. The samples from *Mosaic I* were selected considering the relation of the reading topic with the subject areas of the content teachers and the timing of the reading syllabus.

Procedure

One month before the data collection began, a letter requesting permission to conduct the study, with copies of the interview procedures, and a copy of the questionnaire was sent to the Head of the School of Foreign Languages at AU. The form was then sent out to the Dean's office for receiving permission for the study.

In determining which faculties and instructors to study, the researcher examined the total number of the English-medium courses and the instructors from faculties with the greatest numbers of students enrolled in the AU as a whole for each year. The faculties with the greatest number of the students in AU were generally equal, 40-50 students, so all English-medium subject area courses, a total 54 courses in the first term of the 2004-2005 academic year, were intended to be included in the study. However, after initial contact with the instructors of these courses, it was discovered that only 28 of the 54 courses were English medium. The remaining 26 courses were either conducted in Turkish with Turkish materials or later cancelled for 2004-2005 academic year. The researcher was able to contact 20 instructors out of 28 in order to conduct the study.

Interviews were scheduled and the final version of the questionnaire was delivered to the participants when the researcher met with them during the weeks of March 7 and

April 15, 2005. The questionnaires were distributed on the same day with the interviews. Then the questionnaires were returned via campus mail or by hand.

The data from the questionnaire was entered into the SPSS Version 11.5 program and was analyzed by the researcher. For the last part of the questionnaire, qualitative data was analyzed through categorization of data and coding procedures.

The interviews were conducted with 20 subject area instructors from five different faculties and a school at Anadolu University (See Table 1). The recorded interviews were then transcribed and coded immediately after each interview. The transcription was written on a table and expected answers of the participants were underlined and titled according to interview questions and research questions. Then, the titles were organized by their topics and frequency of occurrence. The same coding system was applied to the notes from unrecorded interviews. A sample transcription with coding of an interview and its English translation are presented in Appendices D & E.

During the meetings, 15 text samples from the textbooks were collected. After collecting subject area text samples, four reading passages from the course book of the Upper Intermediate Reading Course at preparatory school were collected in order to conduct a close analysis of the texts. The texts were scanned and checked for errors which that might have occurred while scanning.

The texts were analyzed in terms of their readability levels and vocabulary frequencies using the following computer software programs: Flesch-Kincaid Readability Formula in Microsoft Word and Vocabprofiler (Web v 2.0) by Heatley & Nation (1994) and adapted for WWW by T. Cobb. The spelling and grammar errors in

texts were double-checked while using Vocabprofiler because of some spelling errors which occurred in using the program.

Data Analysis

In this study, the data analysis process was conducted by close analysis of questionnaires, interviews, and of academic reading texts. The questionnaires, readability charts, and vocabulary level analyses constitute the quantitative data analyses. Recorded interviews with participating instructors and the comments from the open-ended sections of the questionnaire constitute the qualitative data for this study.

The questionnaire allowed the researcher to gather data to discover the academic English reading requirements and the skills necessary to meet the requirements. The items in the questionnaire were analyzed using SPSS Version 11.5. Descriptive statistics outputs, frequencies only, were the basis of analyses of the questionnaire.

This text analysis aspect of the study can be regarded as corpus research. The corpus, a collection of written or spoken language on a specific subject, was sampled from required readings from course books in subject areas. In corpus-based research, a representative corpus is analyzed with the use of computer-assisted techniques (Biber & Conrad, 2001; Nation, 2001). The sample texts were analyzed in terms of readability scores with Flesch-Kincaid Readability Formula in Microsoft Word, and vocabulary frequency with Vocabprofiler (Web v.2.0).

In order to discover the readability scores of the sample texts, Flesch-Kincaid Readability Formula in Microsoft Word was used, as it is more easily available than other readability formulas. The Flesch-Kincaid Readability Tests are readability tests designed to indicate how difficult a reading passage is to understand. The Flesch-

Kincaid Readability Formula is based on the average words per sentence and number of syllables per word. The formula for Flesch-Kincaid Reading Ease is as follows:

$$1.015 \times (\text{average sentence length}) + .846 \times (\text{number of syllables per 100 words})$$

Get the total of these two items, then

$$206.835 - \text{total} = \text{Flecsh Reading Ease}$$

The formula presents readability statistics under three categories, counts, averages and readability. Counts include the number of words, characters and paragraphs. Averages include the number of sentences per paragraph, words per sentence and characters per word. The last category is dedicated to readability scores. Readability scores include the number of passive sentences, Flesch Reading Ease and Flesch-Kincaid Grade Level.

Flesch Reading Ease places text samples on a scale of 0-100. It measures reading from 100 (easy to read) to 0 (very difficult to read). Higher scores indicate material that is easier to read; lower numbers mark harder-to-read passages. For instance, a sample text with a Reading Ease score of 18.7, the sample from the Accounting book, would be categorized as a “very difficult” text for readers according to the scale, whereas a book with a Reading Ease score of 46.3, the sample from Chemistry book for example, as a “difficult” book among the samples. Table 5 presents the corresponding Flesch Reading Ease Scores according to reading difficulty and approximate grade level.

Table 5

Corresponding Flesch Reading Ease Scores to reading difficulty and approximate grade level

Score	Reading Difficulty	Approximate Grade Level
90 – 100	Very Easy	4th grade
80 - 90	Easy	5th grade
70 - 80	Fairly Easy	6th grade
60 - 70	Standard	7th - 8th grade
50 - 60	Fairly Difficult	Some High School
30 - 50	Difficult	High School - College
0 - 30	Very Difficult	College level and up
Source: Grammatik (software package and documentation)		

Sample texts were analyzed according to vocabulary frequency. Frequency- based studies help to identify the vocabulary items that would be more beneficial for students in order to comprehend texts (Nation, 2001). For this purpose, the sample texts were analyzed in Vocabprofiler (Web v. 2.0), which was originally designed by Nation & Heatley (1994) as ‘Range’ and adapted by Cobb as WebVP. VocabProfile provides information on how many words the text contains from the four frequency levels; it presents the list of the most frequent items in 1000 word list, items in 1001-2000 word list by Nation and Hwang (1995), the Academic Word List by Coxhead (2000), and words that do not appear on these lists.

Conclusion

This chapter on Methodology has presented general information about the aim of the study, listing the research questions the researcher attempted to answer. It also provided information about the participants of the study, instruments used, data collection procedures, and data analysis procedures. In the next chapter, the data analysis

is presented using the above-mentioned statistical and qualitative methods to answer the research questions.

CHAPTER IV: DATA ANALYSIS

Introduction

This study investigates the reading expectations of subject area instructors in first-year English-medium subject area courses at Anadolu University. The study also examines reading texts required in these courses based for readability level and vocabulary frequencies. The data was collected through questionnaires, interviews and a close analysis of a sample text from the selected required textbooks of first-year English-medium subject area courses and Upper Intermediate level Reading Course book, *Mosaic I*, at EPS. The texts belong to *Mosaic I* were compared to the target texts belong to subject area textbooks. The collected data were analyzed to answer the following research questions:

Research Questions

1. What are the academic reading requirements of the first-year subject area instructors in different departments of Anadolu University (AU)?
2. What are the discourse types, readability levels and vocabulary frequency of academic texts that are required by the first-year subject area instructors in different departments of AU?
3. Do the academic reading requirements, discourse types, readability levels, and vocabulary frequency of academic texts required by the first year subject area

instructors in targeted departments at AU match the exit reading requirements of students in Upper Intermediate level of English Preparatory School (EPS)?

This chapter consists of three sections. In the first section, an analysis of the questionnaire returned by thirteen-first-year English-medium subject area instructors is presented. Supporting data collected through interviews is also introduced. In the second section, the results of the sample textbook analyses are presented in two sub-sections. In the first sub-section, the sample readability scores and interpretations are presented. In the second sub-section, vocabulary frequencies of the sample textbooks are presented. In the same section, the readability and vocabulary frequency results of the first year university texts are compared with the Upper Intermediate Level, Reading Course Book used in the Preparatory Program. The third section presents the interview findings of twenty English-medium subject area instructors from five different faculties with regard to required reading skills, texts and student difficulties in reading.

Data Analysis

Questionnaire

The questionnaire was distributed to twenty participants. Only thirteen out of twenty questionnaires, 65%, were returned to the researcher. The data from the questionnaire was entered into SPSS Version 11.5 program and analyzed by the researcher. The questionnaire consists of six parts. Part A included demographic information about the participants such as faculty, department, academic title and experience in English-medium instruction. Part B gathered information about the courses taught by the instructor for freshmen students in the 2004 Fall Term. Part C investigated instructors' perceptions of the frequency of text types required in the first

year courses. Part D covered the instructors' expectations regarding specific reading requirements, such as reading to identify author's point of view. Part E asked for identification of the knowledge structures that are typical features of subject specific texts and the difficulties students have with these knowledge structures. Finally, Part F was an open-ended comment section for instructors. The data were analyzed using descriptive statistics, specifically, according to mean scores. For the last part of the questionnaire, the open-ended questions, the qualitative data was analyzed by coding and categorizing the data.

The questionnaire data from sections A, C ,D and E dealing with required text types, academic reading expectations, and knowledge structures, respectively were analyzed with descriptive statistics. Part B and F, which were open-ended questions, was analyzed by coding the answers of the participants.

Text Types

To determine the types of texts required by the subject area instructors in Part C, participants were asked to indicate, from a selection of academic texts, how frequently they were used in first year courses. The items were posed using a four point Likert-Scale with the following values: Never (1), Sometimes (2), Often (3), Always (4). Table 6 presents the values used interpretation of the means.

Table 6.

Values of interpretory means for Part C

Value	Mean Range
Always	3.26-4.00
Often	2.51-3.25
Sometimes	1.76-2.50
Never	1.00-1.75

The mean for each item in Part C, required text types, is presented below in Table 7 below.

Table 7.

Means for required reading texts across faculties ranked by total Mean

Part C. Reading Texts	M
Course Book	3.76
Lecture Handout	3.23
Exam questions	2.69
Web-based articles	2.15
Reading texts as part of exam questions	2.15
Articles from periodicals and magazines	1.76
Articles from professional journals	1.76
Laboratory or computer manuals	1.53
Technical reports	1.46
Newspaper	1.07

Note.Number of Participants: (N=13), M: Mean

Among the ten different text types, only course books were reported as being ‘always’ used with a mean 3.76. Only three out of thirteen participants reported using the textbook often in their courses.

Interviews also provide support for the use of course book as the first requirement of subject area instructors. Below are the statements of subject area instructors who expect students to read the course book as the basic requirement.

(P1: Calculus I) We expect our students to **read the course book parallel to the syllabus** on their own and solve the problems in the course book.

(P6: Int. to Business) My **priority** in terms of reading is that students **read the assigned chapter carefully** before class.

(P10: Int. to Visual Communication) They **follow the course book during the lesson** because the topics are included. **All the topics** that I present to them are **included in the course book**. They are able to find the necessary information in it if they have missed the lesson or missed some points while listening to the lesson.

The Science and Mathematics courses consist of problems and calculations unlike the reading texts in Social Sciences which require students to deal with exposition. However, in order to solve these problems and do calculations, students still need to read the hypotheses and explanations beneath them. According to the participants who conduct Natural Science courses such as Calculus and Chemistry, the course books provide necessary information, and students need to comprehend them well to cope with the calculations. Participant 1 from the Engineering Faculty continues his comments on the importance of reading as follows:

(P1: Calculus I) We not only expect our students to read, but also we expect them to solve the problems in their books. The number of problems in the book is high as it belongs to Natural Sciences. However, **before solving those problems, students absolutely need to read the course book.**

As was indicated previously shown, two participants from the School of Civil Aviation and one from Engineering and Architecture Faculty, only ‘often’ require course books in their classes. These three participants prefer using materials from different resources in their courses rather than using a single course book all the time.

(P 2: Int. to Civil Aviation) We are conducting the same courses; Introduction to Civil Aviation and Air Transportation. **We do not follow a particular book.** We prepare the course and conduct the course. As it is a lecture type course, we expect students to read different sources and bring some information on that day’s topic for the lesson. This information is on the latest news that might be interesting for them about Civil Aviation

(P 20: Int. to Civil Engineering) **I do not prefer a single book to follow.** I prepare **notes** to students **from different sources.** Students are required to read these texts rather than a single course book.

The second most frequently used type of text (Mean=3.23) is lecture handouts. Lecture handouts include two different types. One type is defined by the participants as

the notes that are taken by students during lesson. In this case, the instructor dictates the important points for students to write, uses the board to emphasize important points or to solve a problem step-by-step, and students copy from the board. The second type of handouts are copies of lecture notes or outlines either prepared by the course instructor or provided with the book by the publishers, including Power Point presentations. Samples of lecture handouts that are prepared by the instructors from Introduction to Visual Communication and General Chemistry courses, and the samples provided from the publishers of the original book from Financial Accounting course book are presented in the Appendix F. Students are expected to read these lecture handouts before or after classes. Comments from instructors about use of lecture handouts follow:

(P14: Structure of Materials) We are not sure if students read the course book or not. I give the course material to students before hand. I generally conduct the lesson with Power Point presentations. I give the presentation handouts before hand. Students **read those handouts before coming to class.**

(P12: Int. to Economics) **The Power Point presentation CDs from the book are sold with the course book.** All students have the presentation. They study from these after each chapter.

(P11: Financial Accounting) **I solve some sample questions on the board.** For instance after two chapters, I do not present a new topic in the class on Power Point. I solve some sample questions that combine the two units together. **I write the questions on the computer and deliver them as handouts.** Then I solve those problems.

The instructors agree that the aim of using lecture handouts is to help students follow the course more easily and guide them before or after each class session by giving the gist of the lesson.

Exam questions are also often used and ranked third in terms of text types used in subject area courses (Mean: 2.69). The distribution of the responses to this item showed

variations from the normal distribution. Therefore, Table 8 below shows the actual frequencies for exam questions.

Table 8.
The frequency of exam question across faculties

Faculty	Reading texts as part of Exam Questions				N
	Never	Sometimes	Often	Always	
Economics and Administrative Sciences	3	1	0	0	4
Engineering and Architecture	2	1	1	1	5
Science	0	0	1	0	1
Fine Arts	0	0	1	0	1
School of Civil Aviation	0	1	0	1	2
Total	5	3	3	2	13

Note. N= Number of Participants

Two participants from different faculties indicate that they always require students to read exam questions, and five participants never require reading in exam questions. The choice of the participants in the Economics and Administrative Sciences and Engineering and Architecture Faculties who never require students to read exam questions is because of the content of the course. The exam questions may consist of numerical problems or graphics in which students do not need to read a text. In interviews, participant 7 from Computer Engineering and Participant 12 from Economics clarify the exam and question types as follows:

(P7: Int. to Computer Engineering) The **first** mid term is written. Students are asked to **clarify an item**. It is textual. But the **second** mid term is **writing a computer program**.

(P12: Int to Economics) We do **not** ask **descriptive** questions. The questions are **analytical**.

However, the content of other courses may require question types that include reading instructions, sample situations or questions. The gap on this item is probably due to the content of the courses and the exam question types.

Among the other text types provided in Part C, web-based articles, articles from professional journals, articles from periodicals and magazines, reading texts as part of exam questions, and laboratory or computer manuals are ‘sometimes’ required. The reason that these are only sometimes required is probably because the requirements for first year students are not as detailed those for upper level classes. In the first year, the purpose of the courses is to introduce the students to the field.

(P3: Int. to Civil Aviation) In the first year course, **we give short reading passages** to students and want them to read to get the basic information about the subject area. **Or, we assign them to find short passages about the next class topic** and share it in the classroom.

The required tasks requiring just reading the course book are also simpler for first year students compared to upper classes. As mentioned by participants 2 and 3 above, students need to refer to other text types like articles from professional journals or web-based articles when they are required to write a report or a presentation.

Reading Purposes

Part D aims to identify the required academic reading purposes of students by asking participants respond to seven items using a four point Likert-Scale. The descriptives for the items are as follows: not important (1), not very important (2), important (3), very important (4). Table 9 presents value labels.

Table 9.
Value of interpretory means for Part D

Value	Mean Range
Very Important	3.26-4.00
Important	2.51-3.25
Not Very Important	1.76-2.50
Not Important	1.00-1.75

The findings are represented in Table 10.

Table 10.
Mean Scores of Required Academic Reading Purposes Across Faculties

Academic Reading Purposes	M
To identify author's point of view	3.76
To make a summary of a text	3.15
To get the general idea of the text	3.15
To find specific information in a text	3.07
To paraphrase some information in the text	2.84
To identify important information in the text	2.76
To make inferences to get implied message in a text	2.00

Note. M=Mean, Number of Participants (N=13)

Six of the seven academic reading purposes are considered at least ‘important’ by the participants. Reading to identify the author’s point of view is the only purpose considered very important (Mean: 3.76). Five of the academic reading purposes were considered ‘important’ (M= 3.13-2.76). All six of these purposes are important parts of ‘critical thinking’. Critical thinking basically includes the use of information and learning in new situations to solve problems or make decisions (Angelo & Cross, 1993). Based on the interview findings and the qualitative data in the questionnaire, critical thinking is a basic expectation of all participants in the study. Students are expected not only comprehend the information in a text, but also identify the author’s point of view, make comments on it and relate it into real life situations or practice.

(P6: Int. to Business) The course book is very well designed. The content is very loaded. There are a lot of sample cases. **The questions drive them to think critically.** There are lots of samples from real life. The samples belong to real companies. Students are required to think critically on the subject and relate it to real life situations.

Knowledge Structures

Part E of the questionnaire on Knowledge Structures has two sub-sections. In the first sub-section, participants are asked to choose the knowledge structures that are typical in their subject areas on four point Likert Scale with the following descriptives: rare (1), sometimes appear (2), typical (3), very typical (4). Label values for Part E, section I are presented in Table 11.

Table 11.
Values of interpretory labels for means for Part E, section I

Value	Mean Range
Very Typical	3.26-4.00
Typical	2.51-3.25
Sometimes Appear	1.76-2.50
Rare	1.00-1.75

Table 12 displays the results for typical knowledge structures in the field ranked according to mean scores.

Table 12.
Mean Scores of Knowledge Structures in Texts

i. Typical Knowledge Structures in the Field	M
Description	3.46
Principles	3.46
Choice/Decision	3.23
Classification	3.07
Sequence	3.00
Evaluation	2.76

Note. M=Mean, Number of Participants (N=13)

All the knowledge structures were considered ‘typical’ or ‘very typical’. Description and principles can be interpreted as very typical knowledge structures in the academic texts required by the participants, with a mean of 3.46. First year, first term courses generally aim to provide the basic knowledge, patterns, concepts and principles in the subject area.

(P11) This course, financial accounting, is a kind of logic course. Students need to get the logic of the course. Each chapter is a separate piece. The whole picture is completed when the book has finished. **Students need to know and understand the concepts and key terminology with definitions related to accounting in order to understand the course.** Without knowing the particular concepts, they fail to understand the course.

The knowledge structures also vary according to the content of the subject area. The nature of the subject area determines the content of texts in course book and the knowledge structures in texts. However, descriptions and principles are perceived to be the basic components of academic texts required by these instructors.

The other knowledge structures are considered typical features of the texts: Choice/Decision with a mean of 3.23, Classification with a mean of 3.07, Sequence with a mean of 3.00 and Evaluation with a mean of 2.76. Although they are not considered as ‘very typical’, these knowledge structures are included in academic reading texts and play a crucial role for students in understanding the subject matter. The following information on the content of the course and question types reflects the knowledge structures in texts.

(P20: Civil Engineering) This course is based on the history of civil engineering, **main divisions of civil engineering department**, theoretical and experimental studies; taking and analyzing of experimental data.

(P6: Int. to Business) **I expect students to find examples** from the real world. They should be aware of it. What they read gains a meaning when they are able to show its relevance with the real life..... The content of the book is

loaded. **There are lots of sample cases** that are taken from real world **in the book**. They are the sample cases belong to real companies. **Students have to read them and make comments on the sample cases** by following the questions.

The second sub-section of Part E covers course instructors' perceptions of the knowledge structure types that students have most difficulty with in reading. The value labels of the four point Likert Scale used the following descriptives: no difficulty (1), with effort (2), some difficulty (3), most difficulty (4). The ranges of the value labels of Part E, section II is presented in Table 13.

Table 13.
Values of interpretory labels for means for Part E, section II

Value Label	Range
Most Difficulty	3.26-4.00
Some Difficulty	2.51-3.25
With Effort	1.76-2.50
No Difficulty	1.00-1.75

The mean for each item in Part E, section II is presented in rank order below in Table 14.

Table 14
Mean Scores of Knowledge Structures that are difficult for students in reading

ii. Difficult Knowledge Structures for Students	M
Evaluation	2.84
Choice/Decision	2.76
Description	2.46
Classification	2.38
Sequence	2.30
Principles	2.30

Note. M=Mean, Number of Participants (N=13)

As it is presented in Table 14, Evaluation with a mean of 2.84 and Choice/Decision with a mean of 2.76 are chosen as the Knowledge Structures that require ‘Some Difficulty’. The remaining four knowledge structures are considered as easier with instructors believing students can read them ‘with effort’.

Participants reported that they require both cognitive and meta-cognitive skills from their students. Students are required first to show knowledge and comprehension, and as the next step of learning, they are expected to achieve application, analysis, synthesis and evaluation as included in Bloom’s Taxonomy. Application, analysis, synthesis and evaluation require critical thinking abilities. Participants also argue that if students take care and work hard, they are able to comprehend reading texts.

(P: 5 General Chemistry) Students say that they do not understand, and expect me to conduct the course in Turkish. I think they choose the easier way. What I observed is **that students give up complaining when they see they have no solution but start reading the textbook**. Although they do not understand after first reading, they go on for second or third reading. **If they read and spend time on it, they begin to understand and succeed the required outcomes.**

(P: 14 Materials in Practice) Success is related with the study habits of students. **If they work hard, read and explore something, they succeed** in either Turkish or English. **Language may not be a barrier for students who really work hard.**

However, only comprehension is not enough to achieve tasks. Students need to apply the new information in problem solutions, analyze and evaluate sample situations, and relate the new information into practice.

Text Analysis

For this study, the researcher collected fifteen text samples of required reading from first-year, first-term English-medium courses in the Engineering, Economics and Business Administration Sciences, Communication, and Science Faculties of Anadolu

University. In addition, sample texts from *Mosaic I*, the Upper-Intermediate Level Reading Course Book at the Preparatory School were selected in order to compare the required texts of both the Preparatory School and first-year, first-term courses. Texts from *Mosaic I* were selected considering the topical closeness to the target texts in first year classes. Text samples were analyzed for readability levels and vocabulary frequency.

Readability Statistics of Sample Texts

All the sample texts from the course books were analyzed for readability with Flesch Reading Ease available in Microsoft Word Software program. Readability formulas present the difficulty of a text, based on the number of words per sentence and the number of letters or syllables per word. The Flesch-Kincaid readability formula presents the readability scores in three categories; counts, averages and readability scores. Counts include the number of words, characters, paragraphs and sentences. The second category, averages, includes the number of sentences per paragraph, words per sentence and characters per word. Readability scores present the number of passive sentences in a text, Flesch Reading Ease value and Flesch-Kincaid Grade Level. Below in Table 15, Flesch Reading Ease scores of the sample texts are presented in rank order in order to demonstrate the difficulty levels of the sample texts.

Table 15
Flesch Reading Ease Scores of the Sample Texts in Rank Order

Rank	Course Names	Text Title	Flesch Reading Ease	Reading Difficulty
1	Financial Accounting(Business)	<i>Accounting</i>	18.7	Very Difficult: College Level and Up
2	Mathematics for Economists	<i>Calculus</i>	19.3	
3	Financial Accounting (Economics)	<i>Accounting Principle</i>	27.4	
4	Introduction to Industrial Engineering	<i>Introduction to industrial and systems engineering</i>	27.5	
5	Introduction to Business	<i>Contemporary Business</i>	29.5	
6	Introduction to Computer Engineering	<i>Computer Science: an overview</i>	36.0	Difficult: High School-College Level
7	Calculus I	<i>Calculus</i>	37.2	
8	Business Management	<i>Contemporary Concepts and Practices</i>	38.3	
9	General Chemistry (Material)	<i>Business Management Chemistry, The Study of Matter and Its Changes</i>	38.6	
10	Up-Int Reading Course	<i>MosaicI*</i>	40.0	
11	Introduction to Chemical Engineering	<i>Elementary Principles of Chemical Processes</i>	40.4	
12	General Chemistry I	<i>Chemistry: The Central Science</i>	41.0	
13	Introduction to Economics	<i>Economics</i>	42.4	
14	Introduction to Sociology	<i>Sociology</i>	44.1	
15	Introduction to Visual Communication	<i>The MAC is not a Typewriter</i>	46.2	
16	General Chemistry (Industry)	<i>Chemistry The Study Matter and Its Changes</i>	46.3	
Average			35.5	Difficult

Notes. *Mosaic I* is not ranked and considered in averages; it is inserted for comparison purposes, Reading difficulty scale for Flesch Reading Ease scores is presented in Table 5, Chapter 3, Methodology, pg 38.

The scores of the Flesch Reading Ease are distribution on a scale of 0-100.

Higher scores indicate material that is easier to read; lower numbers indicate that a passage is harder to read. To illustrate, the *Accounting* text in Table 17 with a score of 18.7 is the most difficult text to read. However, the text sample from the textbook titled *Chemistry: the Study of Matter and Its Changes*, with the highest score of 46.3, is the

easiest text to read among the fifteen first-year, first-term text samples. The average score for the fifteen text samples is 35.5, which is interpreted as difficult.

The Flesch Reading Ease score for *Mosaic I* is 40.0, making it the tenth more difficult text. The difficulty scores of the nine texts are less than *Mosaic I* and therefore more difficult. This implies that the sample text from Preparatory program is more difficult than six out of sixteen sample texts. *Mosaic I*, the reading course book for the Preparatory School, is thus centrally placed, making it appropriate in terms of readability for the demands of first year classes at Anadolu University.

Vocabulary Frequency Distributions of Sample Texts

The sample texts were also analyzed for vocabulary frequency by using VocabProfile, Web VP (v. 1.5) On-line Program adapted by T. Cobb from Range, which determines the range and frequency of words in a text, and was originally developed by Nation and Heatley (1994). VocabProfile is a computer program that performs lexical text analysis. In other words, VP measures the proportions of low and high frequency vocabulary required by a native speaker or language learner to read written text. It takes any text and divides the words into four categories by frequency: K1 (the most frequent 1000 words of English), K2 (the second most frequent thousand words of English), AWL (570 words that are frequent in academic texts across subjects), and Off-list words (the remaining words which are not found on the other lists). For discussion purposes, the results on vocabulary frequency lists are presented and interpreted under two subheadings. First, the scores of *Mosaic I* are compared to the average scores of the sample texts from first year texts book and an academic corpus study by Coxhead (2000) based on K1, K2, AWL and Off List words. Then, the scores of K1, K2, AWL and Off

List words in the 15 texts collected at Anadolu University are analyzed individually in relation to *Mosaic I* through running percentages and rank order of the texts based on the outputs of Vocabprofile.

Mosaic I compared to the Anadolu Corpus and a general academic corpus

The study by Coxhead (2000) analyzed academic texts from different fields, with a balance of science, arts, commerce and law, for their vocabulary frequencies based on the four word lists presented above. In this study, the averages of fifteen target texts are compared to a sample text from *Mosaic I*. Table 16 presents the average percentages of vocabulary frequencies in an academic corpus (Coxhead, 2000), in the target texts at English-medium departments of Anadolu University and a sample text from *Mosaic I*.

Table 16

The coverage by the different kinds of vocabulary in an academic corpus, Anadolu Corpus and *Mosaic I*

Vocabulary Level	Academic Corpus	Anadolu Corpus	<i>Mosaic I</i>
	% coverage	% coverage	% coverage
K1 Words	71.4	75.1	76.9
K2 Words	4.7	6.0	4.5
AWL	10.0	9.1	6.2
Off List	13.9	9.8	12.2
Total	100.0	100.0	99.8

Note. Slight variations in the numbers is due to rounding to one decimal place as Academic Corpus (Coxhead, 2000) is also rounded to single decimal points.

The distribution of vocabulary in the three corpora is relatively similar. The percentage of vocabulary from the first 2000 (K2) word family is virtually the same for both the Anadolu Corpus (81.1 %) and *Mosaic I* (81.4%). Nation (2000) suggests that the 2000 word level as being the ideal level for the study of high frequency words, and suggests that EAP students particularly use it as a source for comprehending academic texts.

Coxhead's Academic corpus has a lower percentage of words at this level (76.1%), with the difference being made up by a higher percentage of AWL and off-list words in her corpus. This result may reflect the level of texts Coxhead choose for her corpus, which were advanced compared to beginning textbooks and a reading skills book. The AWL includes the words that university students encounter most frequently in academic texts. Because the AWL presents words that are high frequency in academic texts, this list provides a base for academic reading comprehension (Coxhead, 2000; Thurstun & Candlin, 1998).

The percentage of off-list words in *Mosaic I* (12.2%) is more comparable to Coxhead's corpus (13.9%) than to the Anadolu Corpus (9.8%). As *Mosaic I* is a topic-based book and includes reading texts from popular journals, it may include a higher percentage of off-list words.

The difference between the Anadolu Corpus and *Mosaic I* in off-list words is made up at the level of the AWL, where the Anadolu Corpus contains about 3% more such items than *Mosaic I*. Because off-list words should not be a focus of direct instruction, but AWL should be, this difference is important. *Mosaic I* may need more supplemental support in terms of AWL items in instruction.

Analysis of Texts by Word List Scores in Rank Order

The outputs of vocabulary frequency analyses of *Mosaic I* and the individual texts in the Anadolu Corpus are interpreted under two subheadings. First, the scores of *Mosaic I* were compared with the average score of the target texts based on K1, K2, AWL and Off List words. Then, the scores of K1, K2, AWL and Off Word lists are analyzed considering the running percentages and rank order of the texts.

Table 17 presents the scores of vocabulary frequency of the target texts and *Mosaic I* by K1, K2 lists, AWL and Off List words with averages. It includes the number of total words, the running percentages, and the number of words in each vocabulary list, their percentages and ranks for each target text. *Mosaic I* has been inserted for comparison purposes at the bottom of the table. What ranks it could be located between is indicated in the appropriate column. The table also includes the total number of words and percentages at each level of all fifteen target texts and *Mosaic I*.

Table 17

Vocabulary frequency of sample texts with the number of tokens, percentages and rank in four categories of word lists

Book Title	Total Wds.	% K1 Wds	K1 Rank	% K2 Wds	K2 Rank	Running % K1&K2	% AWL Wds	AWL Rank	Running %	% Off Wds	Off Wds Rank
<i>Calculus</i>	320	70.94	14	4.38	11	75.32	14.06	1	89.38	10.62	6
<i>Accounting</i>	439	71.30	13	7.52	4	78.82	12.98	2	91.18	8.20	10
<i>Computer Science: an overview</i>	469	73.13	10	6.61	6	79.74	10.87	3	90.61	9.38	9
<i>Elementary Principles of Chemical Processes</i>	611	71.36	12	7.53	3	78.89	10.47	4	89.36	10.64	5
<i>Chemistry: The Central Science</i>	678	73.75	8	7.96	2	81.71	10.32	5	92.03	7.96	11
<i>Accounting Principle</i>	509	68.57	15	3.73	13	72.3	10.22	6	82.52	17.49	1
<i>Chemistry The Study of Matter and Its Changes^{6th}</i>	637	78.02	5	6.91	5	84.93	10.20	7	95.13	4.87	15
<i>Contemporary Business</i>	904	71.79	11	6.53	7	78.32	9.07	8	87.39	12.61	3
<i>Introduction to industrial and systems engineering</i>	688	76.31	6	8.58	1	84.89	8.87	9	93.76	6.25	14
<i>Economics</i>	776	80.41	1	3.35	14	83.66	8.51	10	92.17	7.73	13
<i>Chemistry The Study of Matter and Its Changes^{5th}</i>	397	73.55	9	6.30	8	79.85	7.81	11	87.66	12.34	4
<i>The MAC is not a Typewriter</i>	349	79.08	3	2.87	15	81.95	7.74	12	89.69	10.32	7
<i>Calculus I</i>	411	75.18	7	3.89	12	79.07	7.30	13	86.37	13.63	2
<i>Contemporary Concepts And Practices Business Management</i>	748	79.01	4	4.41	10	83.42	6.42	14	89.84	10.16	8
<i>Sociology</i>	630	80.32	2	5.87	9	86.19	6.03	15	92.22	7.78	12
Averages	571	75.13	-	5.95	-	81.08	9.10	-	90.18	9.80	-
Mosaic I	1217	76.99	5-6	4.52	9-10	81.51	6.24	14-15	87.75	12.24	4-5

Notes. Wds: Words, #: Numbers, %:Percentage

Table 17 confirms in greater detail the results from Table 18. *Mosaic I* has a nearly equal percentage of words from the first 2000 word families as the average of the texts from the Anadolu Corpus, and in terms of rank places eighth among all texts at this level.

However, above the 2000 word list level the three percent differences in distribution of AWL and off-list words between *Mosaic I* and the Anadolu Corpus texts makes a substantial difference. *Mosaic I* ranks 15th of the texts in its percentage of AWL words, but 5th in its percentage of off-list words. The low placement of *Mosaic I* in terms of AWL words suggest that students using it may not be exposed to the common academic vocabulary level that they will need to read texts in subject area classes. In addition to 2000 word level, university students need academic words to comprehend reading texts. If students recognize the high frequency words in the AWL, they can be familiar with 95% of the text (Nation, 1990) and comprehend it. Moreover, the high placement of *Mosaic I* in terms of off-list words suggest that students are exposed to many low frequency words that may not be beneficial for students for comprehending other texts they read.

Topical Text Comparison

Mosaic I is a topic-based book. Therefore, three reading passages from *Mosaic I* were selected according to how well they match in terms of topic with the subject area textbooks. The reading texts from *Mosaic I* were compared to texts from the faculties of Economics and Business Administration, Fine Arts and Computer Engineering in terms of readability levels and vocabulary frequencies.

The four text samples from Economics and Business Administration Faculty were averaged and then compared with a sample text on a related topic from *Mosaic I* titled *Money Matters*. In order to compare the subject area texts to *Money Matters*, the average scores of the sample texts from four subject area textbooks were calculated in terms of readability scores and vocabulary frequencies. The averages were compared to the scores of the reading text “Money Matters”. Table 20 below presents the readability scores and vocabulary frequencies of *Mosaic I* and the averages of four textbooks from Economics and Business Administration Faculty.

Table 18
Comparison of Upper Intermediate Reading Course at Preparatory School to texts from books of Economics and Business Administration Faculty

<i>Mosaic I: Money Matters</i>			<i>Average of Four Texts from Economics and Business Administration Faculty</i>		
Vocabulary Frequency			Vocabulary Frequency		
Word List	Number of Words	Percentage	Word List	Average Number of Words	Average Percentage
K1	503	71.55	K1	484	73.66
K2	38	5.41	K2	34	5.17
AWL	25	3.55	AWL	64	9.74
Off List	137	19.48	Off List	75	11.41
Total	703		Total Average	657	
Readability Scores			Readability Scores		
Flesch Reading Ease		41.5	Flesch Reading Ease		35.75
Readability Level		Difficult	Readability Level		Difficult

Both of the readability scores are considered as ‘difficult’ according to Flesch grade level (See Table 5 for Flesch reading Ease interpretation). In terms of 2000 word level, *Money Matters* has a close percentage (76.56%) compared to the average texts from Economics and Business Administration Faculty (78.83%). However, the percentages of AWL and off-list words are significantly different. *Money Matters* has a lower percentage (3.55) of AWL than the average texts on Economics and Business

(9.74). The gap between the percentages suggests that the text used in EPS needs to be supported considering the AWL. The Off-list percentage of *Money Matters* (19.48) is quite higher than the average texts (11.41). *Money Matters* presents a higher percentage of low frequency words to students.

The second topic/text comparison was between the texts titled “High Tech- Low Tech” from *Mosaic I* and ‘*Computer Science: An Overview*’ from the Computer Engineering Department. Table 21 presents the vocabulary frequencies and readability scores of the two texts.

Table 19

Vocabulary Frequencies and Readability Scores of *High Tech-Low Tech* and *Computer Science: An Overview*

<i>Mosaic I: High Tech-Low Tech</i>			<i>Computer Science: An Overview</i>		
Vocabulary Frequency			Vocabulary Frequency		
Word List	Number of Words	Percentage	Word List	Number of Words	Percentage
K1	494	71.59	K1	343	73.13
K2	45	6.52	K2	31	6.61
AWL	62	8.98	AWL	51	10.87
Off List	89	12.89	Off List	44	9.38
Total	690		Total	469	
Readability Scores			Readability Scores		
Flesch Reading Ease	29.6		Flesch Reading Ease	36.0	
Readability Level	Very Difficult		Readability Level	Difficult	

High Tech Low Tech from *Mosaic I* is found more difficult with a little lower score of readability. *Computer Science: An Over View* is interpreted as ‘difficult’ with a readability score of 36.0, and with a score of 29.6, *High Tech-Low Tech* is interpreted as ‘very difficult’. The results for vocabulary frequencies of two texts are similar to previous comparisons. *High Tech Low Tech* has a nearly equal percentage of words in terms of 2000 word level as *Computer Science: An Overview*. However, the differences within AWL and off-list words are important. The lower percentage of AWL and higher

percentage of off-list words of *High Tech Low Tech* compared to *Computer Science: An Overview* reveals once more that the vocabulary items in this text only partly matches with the aim of the reading course at EPS.

Lastly, the text titled *Creativity* from *Mosaic I* is compared to a sample text from *The MAC is not a typewriter*, a textbook that is followed in the Introduction to Visual Communication course in the Fine Arts Faculty. Table 20 presents the vocabulary frequencies and readability scores of these texts.

Table 20
Vocabulary Frequencies and Readability Scores of “Creativity” and *The MAC is not a Typewriter*

<i>Mosaic I: Creativity</i>			<i>The MAC is not a Typewriter</i>		
Vocabulary Frequency			Vocabulary Frequency		
Word List	Number of Words	Percentage	Word List	Number of Words	Percentage
K1	776	76.22	K1	279	79.08
K2	37	3.63	K2	10	2.87
AWL	52	5.10	AWL	27	7.74
Off List	153	15.02	Off List	36	10.32
Total	1018		Total	349	
Readability Scores			Readability Scores		
Flesch Reading Ease	46.6		Flesch Reading Ease	46.2	
Readability Level	Difficult		Readability Level	Difficult	

Both of the texts are equally difficult. The comparison of these two texts by vocabulary frequencies shows the same results as earlier analyses. *Creativity* in *Mosaic I* has a satisfactory percentage of 2000 word level; however, it has a lower percentage of AWL, but a higher percentage of off-list words. These results suggest that *Mosaic I* needs to be supported for the AWL and the off-list words in its texts need to be deemphasized.

Interview Findings

With the purpose of discovering the required reading tasks, purposes, text types and learner difficulties, twenty interviews were held with twenty subject area instructors from English medium departments of Anadolu University. These departments were Communication Sciences, Business and Administrative Sciences, Engineering and Architecture, Fine Arts, Science Faculties and the School of Civil Aviation. The questions explored in the interviews were:

1. What are your expectations and requirements of students in reference to academic reading?
2. To what extent do the students fulfill your expectations? (What is students' actual behavior in your classes? How does this relate to reading?)
3. Based on your observation and personal evaluation of student behavior, what difficulties do students have with reference to academic reading?
4. Do you do anything additional to help students cope with the reading load?

Additional questions were asked to the participants according to their responses to interview questions as the interview progressed.

The first question was asked to discover subject area instructors' expectations and requirements of students in regard to academic reading. The purpose of the second question was to learn whether students fulfill these expectations or not. In responding to the first question, seventeen out of twenty participants require students to read the course book regularly. The remaining three participants prefer using lecture handouts and extra materials, and similarly require students to read these handouts regularly.

The majority of the participants, twelve subject area instructors, expect students to read the related texts before and after classes. In order to follow lessons easily and effectively, students need to come prepared to class.

(P2: Int. to Civil Aviation) We have lecturing lessons. A week before, we give the next lesson topic to students. For instance, ‘we are going to study international civil aviation organization’. **Make some preparation** on this topic.

Thus, students need to come prepared to the class in order to follow the course. As the instruction is English-medium, this creates an extra workload for students. Participant 4, who conducts the General Chemistry Course, emphasizes the difficulty the students have if they do not read the course book and come to the class unprepared.

(P4: General Chemistry) **We tell our students the relevant parts of the course book.** Tomorrow’s topic is thermodynamics. **Study thermodynamics from your book before coming to the class.** But unfortunately, **it is not the case in practice. Reading the course book; this is our expectation** from the students. As the course is conducted in English and the course book is in English, they should come prepared. This is difficult for them. If a student comes to the class unprepared, s/he reveals him/herself. S/He is **unable to follow the course**. S/He never becomes successful because the content is too difficult.

Students are also expected to read the course book after classes in order to review the lesson, analyze, synthesize, and apply the new information. In courses like Calculus or Chemistry, students are expected to solve the relevant problems in their course book. In more text-dependent courses like Business Administration and Economics, students are required to answer the end of chapter questions provided in their course books.

(P1: Calculus) As the content of the book is based on calculations, the number of problems is high. **I expect students to solve those problems. In order to solve the problems, they have to read the book** to understand the logic and hypotheses.

(P12: Introduction to Economics) We have **regular weekly homework**. These are generally **end of chapter questions, or review questions**. The students **need**

to read the chapter well, comprehend it and **apply it** on sample situations or questions.

However, all the participants who required preparation for class or follow up reading after class declared that students do not meet their expectations. In practice, students either do not come prepared or are unable to be prepared in the expected way. Students may also prepare in an inappropriate way.

(P8: Int. to Sociology) I give them the topic before the class; ‘Next week we are going to study this topic’. Sociology course requires a lot of reading. You say that you lack background information. That is true. In order to cope with it, **you need to read a lot**. However, **the ones who read before coming to class are very few**.

(P3: Int. to Civil Aviation) **I expect students to read from different sources, and to get the main points. They just find it, and bring it to the classroom.** This is not what I expect.

Content teachers suggest different reasons why students do not read course books before or after classes. First, the preparations of students are not checked in a spoken or written way by the instructors and the reading is not graded. Also, they feel that for many first year students, they are not aware of why they are required to read.

(P1: Calculus) **We or our assistants do not have enough time to check the homework that we assign to students** as preparation for the class. Therefore, we unfortunately can’t stimulate them to complete the required reading before classes. **They do not have reading habit. If it will not be graded, they do not read.**

(P2: Int. to Civil Aviation) I ask what they have read that week to all students. Otherwise, **they do not read. They are not aware of the importance of reading in the first year**. Like their mothers, we tell them to study, read. **They become aware of this too late**. I think is caused from being a student. It is not the right thing to push or punish them. Therefore, I do not threat them with marks. **When they understand that I do not grade, they do not care for reading.**

(P14: Materials in Practice) **I do not directly check whether students are prepared for the lesson or not.** Exams and written assignments show whether they have read or not.

Moreover, students do not have the habit of reading in their native language, either. This affects their reading habits in English.

(P18: Int. to Chemical Engineering) In general, students do not have reading or homework discipline. They do not read in English **as they do not read in Turkish, either.** They **do not have reading habit in general.**

In addition to reading the course material before or after class, the in class participation of students is another important expectation of subject area instructors. However, students do not meet this expectation of participating in class for several reasons. One reason for this problem is the students' difficulties in understanding the texts they are supposed to read. These difficulties may arise from problems in dealing with unknown vocabulary.

(P12: Int. to Economics) **Students are required to read the related chapter and understand the topic very well before coming to the class.** In the classroom, they are required to make inferences and discuss the topic. **As they do not understand, fail to make inferences,** or as they are unable to express themselves in English, **they do not participate in the classroom.** Since we began English medium instruction, it has been worse year by year.

(P5: General Chemistry) I firstly expect them to go over their language anxieties. As they lack of English background, they may not understand what they read or fail to follow the lesson. **In this case, they are afraid of English medium course and refuse to participate in.** They expect Turkish instruction as a right for them. **If they get over language anxiety, I am sure that they will be successful.** While reading, **if they come across an unknown word, they give up reading** as they think they will not understand the rest of the text. They are afraid of dealing with English language.

Subject area instructors also expect students to develop critical thinking abilities, particularly participating in discussions over the texts book topics they study. As students are not encouraged to think critically in the earlier stages of their educations,

they fail to achieve some tasks that require critical thinking. Ten of the subject area instructors emphasize their expectations on critical thinking. In order to ask meaningful questions about the topic, students need to understand what they read and think critically about the topic. Some expectations on critical thinking are as follows:

(P4: General Chemistry) I expect students to come prepared for the class. During class period, we question and evaluate the topic. **I want students to induce the topic very well. How they are able to make comments and evaluate the topic by themselves based on some principles is important. After they read and listen to me, I expect them to synthesize what they have learned and have an interactive course.** They should **ask questions** like how to use the information beneficially. They should have the potential of using the information they have learned in the lesson. We have some problems with it **as students are accustomed to memorization rather than critical thinking.** Students expect to deal with the same of questions with different numbers rather than dealing with different styles that force them to think critically and use the information.

(P7 Int. to Computer Engineering) In Computer Engineering, **students first have to understand the topic very well. Then they analyze it** and they have to design a model that is developed for a solution. **There is no memorization.** They **have to think critically** in order to achieve this.

The third question was about the difficulties students have with reference to academic reading. The answers from the participants on question three can be classified under two categories: insufficient reading skills and insufficient vocabulary knowledge. In addition to reading difficulties, instructors emphasized learner difficulties in spoken or written expression in English. Participants also pointed out that the reasons for these difficulties are the English background of the students in general, student behaviors, such as lack of positive habits in working and reading regularly, and the effects of background knowledge in terms of subject area.

The first difficulty in reading is that students have problems with certain reading skills such as summarizing information, making inferences, connecting one part of a text

to another, skimming and scanning, drawing inferences and conclusions, identifying important and less important items, and transferring the gathered information into other skills. These problems occur in in-class participation and in exam questions. Specific problems of students with regards to reading skills are emphasized by the subject area instructors as follows:

(P2&3: Int. to Civil Aviation) We ask them to bring some information related to that day's topic. They bring some texts and **read it aloud one by one**. This is the problem. We expect them to read, analyze, deduce and tell us the important points in summary. As they are **unable to comprehend the text due to their English levels in general**, they are **unable to get the important points in the text and present it**. They are **unable to transfer** the information that they gathered from reading **into speaking and writing**. It is again their English backgrounds. If they are good enough to read and comprehend, they would be able to transfer it into speaking or writing. Students have the same problem with exam questions. They write whatever comes to their minds, and we, as graders, must find the answer of the question among their writings. They are **unable to identify the relevant and important information in a text to answer questions**.

Participant 11, who conducts the Financial Accounting course, indicated that students are good at assignments because they do them in groups by discussing, sharing information, and using reference books and dictionaries. However, they fail to achieve the same level on exam questions as they are alone and cannot deal with both the language problem and the subject area knowledge.

(P11: Financial Accounting) There is no problem with multiple-choice type of questions. **They fail to answer open-ended questions that require them to transfer the information they gathered from reading into writing**. For instance I asked them what the four principles of accounting are and explain them with an example. Nobody answered that question. Two or three out of eighty-seven students in the class tried to do it. They are anxious about written expression.

Although writing assignments are not usually required of first year students, if they are asked to write, they have problems because of not understanding assigned readings. This may lead them to plagiarize.

(P 12: Int. to Economics) In Economics department, we have an assignment titled as term project. Within the term, it is related to macro approaches within neoclassical approaches. **Nobody did paraphrasing or that kind of techniques.** They downloaded from the Internet, photocopied from the book and scanned it and brought it as a paper. **They all copied. This shows that they are unable to understand what they read. If they comprehend the reading texts, they will be able to express what they understand with their own words.** Of course there is difference between having difficulties in written expression and being unable to transfer what is gained through reading into writing. I think **students cannot express what they understand from a passage as they do not understand the passage.**

However, results of an informal experiment by another teacher suggest that students may understand, but may not be able to express that understanding.

(P15: Business Management) Students have problems with English in general. This affects their written and spoken expressions. For instance, the scores of the mid term exam were very low. They were all in thirties or twenties. In order to learn the reason for this failure of students, I gave the final exam in Turkish. The success was increased three hundred percent. Students got scores between 85 to 90's. The reason is **insufficient English knowledge.** Students are able to understand what they read and to follow the course in English. However, **as they lack English background, they fail to express what they know both in written and spoken way.**

The other difficulty of students is insufficient vocabulary knowledge. Sixteen out of twenty participants pointed out that students fail to complete the required tasks as they do not understand reading texts, exam, or assignment questions, due to unfamiliar vocabulary items in the text. At first, students lack even the basic vocabulary items according to the sample cases mentioned in the interviews:

(P11: Financial Accounting) I think students' English levels are low. It seems as if **they do not have the basic vocabulary knowledge.** They say that they **couldn't do the assignment or solve a problem as they did not understand**

some words in the questions or instructions. For instance, the word ‘shop’ is a very common word that is known by almost everybody in the city center. They even had a problem with such a word. This was an interesting example for me. The question presented ‘bijouterie shop’ as the company. A group of students; 8-10 students, did not answer the question. I asked them why they did not answer. Their response was that they understood the word ‘shop (n)’ as ‘to shop (v)’ that means the action of shopping. The sentence was very clear: ‘Mr. X has a bijouterie shop.’

(P9: Mathematics for Economists) In an exam, the instruction included a phrase like ‘above X’. Some of the students did not understand and asked for ‘above something’.

Another reason for student difficulties is that students are not accustomed to reading and thinking critically. Because of the quality of the previous stages of education and the university entrance exam, ÖSS, students are accustomed to multiple-choice types of questions and memorization. As it has been mentioned, subject area instructors expect critical thinking rather than memorization. Moreover, instructors claim that students do not read either in English or in Turkish. The lack of reading practice affects their reading comprehension. The teachers suggest that continued practice does lead to success.

(P1: Calculus) Students do **not have the habit of reading**. This is a big problem in their understanding especially in first weeks of the course. **They do not understand as they do not read either in Turkish or in English. Reading in English is certainly more difficult for them.** However, after a few weeks, when they see that they have to read and begin to get accustomed to reading in English, they begin to comprehend reading texts and achieve the required tasks. **The key is the reading habit. If they read, they succeed.**

(P10: Int. to Visual Communication) I **think the basic problem is lack of practice**. In fact **all the references in this field are in English**. Therefore, **they have to read them**. As the reading practice and studies on reading skill is not satisfactory, students have some problems in reading comprehension. **With adequate reading practice, they can handle with it.**

The last reason for student difficulties is lack of background information in subject area and the difficulty of the subject area. Prior knowledge significantly affects the reading comprehension of texts in foreign language (Swaffar, 1988). As students are new to the field, they have difficulties in understanding the texts. Moreover, the difficulty of the subject area causes difficulties. Some subject area instructors who have been conducting the same course both in Turkish and English medium reported that the student difficulties or failures are not caused by English medium instruction. The exams parallel for Turkish and English medium students have presented similar scores.

(P19: General Chemistry I) **I conduct the same course in Turkish and English mediums. The textbook is the same. We preferred a translated book as the exams and assignments of these courses are the same to avoid inconsistency and inequality. The average exam results of the students were nearly the same.** There was only one percent difference that was caused as a topic was not studied in the English medium class before the exam.

The last interview question was asked to discover the techniques that are used by the subject area instructors in order to help students to overcome the difficulties presented above in interview question three. Subject area instructors basically refer to Turkish reference books that are parallel to the main textbook or they clarify or summarize the important or unclear points in Turkish.

(P 16: Financial Accounting) I conduct the course in English. When students do not understand and have some questions about the lesson, they ask me questions and **I explain them in Turkish during break times. Moreover, we have an extra class hour apart from the schedule for Turkish revision of the topic.**

(P9: Calculus) I can see that students do not understand as they look blank. In those times, **I go on instruction in Turkish to help them understand or participate in the course.**

(P8: Int. to Sociology) I do not want to include Turkish in my classes, **but I need to make some clarifications in Turkish** when students do not understand. The reason why I selected this textbook is that **the previous edition of the book has**

been translated into Turkish. Students can access it. We advise students to read it in addition to other reference books about sociology that provide basic knowledge in sociology to help them.

In order to help students to deal with problems with academic reading and have students follow the course, instructors point out the important information, the gist of the lesson or chapter, by delivering handouts, have students take notes during class, ask guiding or follow up questions that summarize the lesson and emphasize important points. These techniques lower the workload of the students as they present the important parts of the lesson. In general, subject area instructors prefer either giving handouts or having students take notes during class that may guide students in both comprehending the course and reading texts better.

(P5 General Chemistry) I use Power Point presentations for each class, and **I deliver the handouts to students to help them understand the topic better.** The presentations are visualized by pictures.

(P19 General Chemistry) In order to help students to understand, **I write the steps of the solution of a problem on the board, and I prepare my own notes to present in the class.** Students take these notes and the notes on the board during class.

(P13: Calculus) **I highlight the important points on the board** to help students focus on them.

As can be interpreted from the quote above, subject area instructors primarily help students understand the course in general rather than focusing on specific problems with reading comprehension. Only one of the participants takes the attention of the students focused on the important parts in the text book to help lower the reading load of the students and to guide them towards the important sections to be read.

(P6: Contemporary Business) The book that we study has a lot of content. Therefore, **I tell them to omit some sections of the book, and guide them towards the important sections.** The main messages that are presented in the

book are required to be read. **By limiting the reading load, I try to motivate them.**

Some of the instructors do not do extra work to help students deal with their reading problems. Participant 12 explicitly stated the reason why s/he does not make extra attempts to help students with reading comprehension as follows:

(P12: Int. to Business) I am conducting an Economics course. **I cannot design my course based on the student difficulties with reading comprehension.**

In summary, the common comment of the twenty subject area instructors from different English-medium departments at Anadolu University with regard to four interview questions are as follows: They basically expect students to read the textbook and comprehend it very well; critical thinking and in-class participation is also emphasized in addition to reading the textbook as requirements of students. Unfortunately, students do not meet these expectations of the instructors due to their insufficient English levels and study habits, including lack of practice. They have problems with reading comprehension and transferring their understanding into writing or speaking. The instructors state that if they work and go over the reading, the students succeed. Subject area instructors mainly help students follow the course and understand topics easily. This indirectly helps students deal with their reading difficulties.

Conclusion

In this chapter, the results of the questionnaire, texts analyses based on readability levels and vocabulary frequency, and interview data have been presented. The next chapter will present the major findings of the study, the implications and recommendations in light of these findings.

CHAPTER IV: CONCLUSION

Introduction

The purpose of this study was to explore academic reading requirements of subject area instructors and to conduct a close analysis of required texts in English-medium departments at Anadolu University (AU). The research questions posed for this study are as follows:

1. What are the academic reading requirements of the first-year subject area instructors in different departments of Anadolu University (AU)?
2. What are the discourse types, readability levels and vocabulary frequency of the academic texts that are required by the first-year subject area instructors in different departments of AU?
3. Do the academic reading requirements, discourse types, readability levels, and vocabulary frequency of academic textbooks required by the first year subject area instructors in targeted departments at AU match the exit reading requirements of students in Upper Intermediate level of English Preparatory School (EPS)?

For the purpose of providing answers to the research questions, the necessary data was gathered through questionnaires, interviews and a close analysis of reading texts.

In the following sections of this chapter, findings of the study, pedagogical implications of the study, and limitations of the study are presented. Finally, suggestions for further studies and overall conclusions are presented.

Discussion of the Findings

The findings from the data analysis in Chapter IV are discussed in two subsequent sections relating to strengths and weaknesses of *Mosaic I* and subject area instructors' perceptions of students' difficulties with reading. The strengths and weaknesses of *Mosaic I* are presented regarding the difficulty level and vocabulary levels of the texts. Subject area instructors' perceptions are discussed in terms of students' reading problems, how teachers help students deal with these problems, students' needs and content teachers' perceptions on the instruction at Preparatory School.

The difficulty level of *Mosaic I* is median for texts sampled. In rank order, *Mosaic I* places as the seventh easiest text, with a score of 40.0, among fifteen texts in the Anadolu Corpus. It is interpreted as 'difficult' and appropriate for High School to College levels according to Flesch Reading Ease scores description (Table 5). It can be concluded that *Mosaic I* is appropriate for EPS students with its difficulty level because students are required to read texts of similar difficulty in first-year introductory courses.

The other strength of *Mosaic I* is in the 2000 word level. The running percentage of K1 and K2 word levels of *Mosaic I* (76.99) just exceeds the average of the fifteen samples from subject area textbooks (75.13). In this circumstance, *Mosaic I* matches the vocabulary needs of preparatory school students at the 2000 word level. The 2000 word level is considered the ideal level for the study of high frequency words. Moreover, it is

a useful source for comprehension of academic texts for EAP students and would be beneficial for them in comprehending further reading texts (Nation, 2001).

Although *Mosaic I* corresponds to the difficulty level and the 2000 word level of the Anadolu Corpus, it has some weaknesses. Considering the average readability score of the Anadolu Corpus (35.5), *Mosaic I* is found easier with a score of 40.0. *Mosaic I* is easier than average of overall texts. It can be concluded that students at EPS need reading practice with more difficult texts to cope with the required texts with higher difficulty levels. The other weakness of *Mosaic I* is related to vocabulary levels.

In terms of the AWL, *Mosaic I* has a lower percentage of words (6.24) compared to both the Anadolu Corpus (9.10) and Coxhead's Academic Corpus (10.0). The amount of AWL words in *Mosaic I* does not meet student needs for academic vocabulary. The AWL includes the words that university students encounter most frequently in academic texts. Because the AWL presents words that are high frequency in academic texts, this list provides a base for academic reading comprehension (Coxhead, 2000; Thurstun & Candlin, 1998).

The higher percentage of off-list words in *Mosaic I* (12.24) than the Anadolu Corpus (9.80) is a disadvantage for students. The percentage of off-list words in Coxhead's Academic Corpus (13.9) is higher than *Mosaic I*, but it includes subject specific words. However, as *Mosaic I* is a topic-based book and text samples generally belong to journals which are not a required genre in subject area courses, it includes off-list words that are of low frequency and probably wouldn't occur in further, subject specific texts. Low frequency words generally make up just over 5% of the words in

academic texts (Nation, 2001). Therefore, the off-list words in *Mosaic I* wouldn't be beneficial for preparatory school students.

In addition to the effect of genre on off-list vocabulary, this mismatch may affect learners' approach to the required genre in introductory subject area courses. Besides the interview findings, the course book was reported as the text genre 'always' being used in instruction, with a mean of 3.76 in the questionnaire. However, the majority of the reading texts in *Mosaic I* belong to a journalistic genre. In reading, genre has an influence in students' using reading strategies (Swales, 1990). Students practice dealing with comprehending journal or newspaper articles, so they may have problems about how to deal with the required reading texts that have a different organization and features.

Instructors who conduct introductory courses first emphasize the weaknesses of students in language and vocabulary, as well as reading and thinking abilities. In addition to language problems of students like grammatical inaccuracy, inadequate vocabulary knowledge is a major problem for students in understanding reading texts in their textbooks or exam questions. Besides vocabulary, students have reading problems caused by lack of the reading habit. As students do not read regularly and lack reading practice, they fail to cope with the required reading tasks. Even when they read and understand the text, they fail to succeed in accomplishing the required outcomes such as answering exam questions or participating in class discussions. In other words, if students do not fail to understand texts, they fail to transfer the gathered information through reading into other skills like speaking or writing and tasks such as interpretation and evaluation. This problem reveals that students also have weaknesses in critical

thinking skills. Being unable to analyze, synthesize and evaluate the gathered information is a reflection of these thinking weaknesses. As a final point, instructors of introductory courses believe that if students pay attention on reading and work hard, they may solve their problems regarding to reading and vocabulary. However, students may need explicit instruction or help in order to deal with reading difficulties.

In order to deal with these difficulties, subject area instructors have developed some methods for helping students. Highlighting important points on the board during a lecture and clarifying important or difficult points in Turkish are the most common ways that instructors help students. Moreover, some teachers prepare handouts for students to follow the course easily. They recommend that students read these handouts before or after each class. These solutions help students to learn about the topics in the syllabus, but may not directly guide them about how they need to read texts to comprehend them effectively. Only one of the instructors directly guides his students in dealing with reading comprehension. He points out the important sections in a chapter before assigning reading to facilitate the reading comprehension of students, and prepares quizzes referring to these important points, aiming to check students' understanding.

Subject area instructors expect Preparatory School to provide the necessary skills to students in order to deal with the difficulties mentioned above. However, some of the instructors recognize the limitations of Preparatory School, such as being limited to one year of education with learners at different levels.

Implications for Practice

The findings of this study indicate that students have difficulty in achieving the required academic reading tasks because they lack general English background, do not

practice reading, and have inadequate vocabulary knowledge. In addition, they are not good at using metacognitive skills in reading, such as integrating information into other skills, thinking critically about the reading text, and relating it into practice.

Considering the literature review and the results of the study, it is reasonable to suggest that the curriculum for English medium instruction should include preparatory education, service English, which aims to provide subject specific use of English, and content courses. These three levels of education need to complement each other. Based on this, the implications for practice are presented in three aspects: a) implications for AU EPS, b) implications for service English and c) implications for content courses.

Implications for AU EPS

First, the materials and contents of other courses besides the reading course need to be examined to see what vocabulary items, language functions and critical thinking activities that subject area instructors demand are provided at EPS. For the Reading Course at EPS, based on the reported student difficulties with vocabulary in reading and the low frequency of AWL words in *Mosaic I*, supplementary material taking K2 words and AWL into consideration need to be developed. Direct vocabulary instruction should be supported in addition to supplementary materials because vocabulary knowledge affects students' understanding of what they read and their ability to use the English language highly. As off-list words constitute a high percentage in *Mosaic I* texts, and off-list words are low frequency words that would not be beneficial for students in further academic readings, they should not be emphasized in reading courses. Moreover, texts with a high percentage of off-list words might be removed from the reading syllabus and replaced by texts with more appropriate vocabulary.

Reading skills should also be explicitly supported to guide students towards successful reading. In particular, students' abilities to analyze, synthesize, evaluate and transfer information into other skills should be promoted. This support will help students with the thinking skills required by their instructors.

In order to familiarize students with the main genre they will be required to read in introductory content courses, samples from textbooks can be included in the Reading Course at EPS for the upper levels. This will provide preparatory students with the opportunity to see real texts, and become familiar with their organization and vocabulary, and deal with comprehending them. Reading teachers at EPS can guide students in how to deal with these texts by instruction in reading strategies such as specifying a purpose for reading, posing questions about texts or connecting one part to another.

Implications for Service English

Service English teachers need to be informed about the language background provided to students at EPS and the requirements of subject area instructors. This kind of information would help the service teachers determine the students' needs and design the course and course materials based on these needs. While preparing materials, the AWL and specific field vocabulary should be considered because all AWL vocabulary cannot receive enough focused instruction at EPS. Moreover, teaching the specific terminology of the field should be an aim of the service English course because such English is faculty specific.

Another way to help students meet the requirements in subject area courses is to develop content-based language courses in conjunction with content courses. Service

English courses might use a content-based approach in their courses. Content-based instruction is an approach to language teaching with the purpose of helping learners be successful in EAP and ESP courses in their schools (Snow, 2001). Larsen-Freeman (2000) extended this definition by describing content-based instruction as integration of language learning and, especially, academic content, which provides learners with opportunities to deal with required tasks in a natural environment. The integration of language and content can be regarded as a form support and cooperation between language teachers and content teachers for the educational benefit of students (Mohan, 1990). The courses share a content base, but the focus of instruction differs. The language teacher emphasizes language skills, such as academic reading or writing, while the content teacher focuses on traditional academic concepts (Crandall, 1994). Language and content courses can be linked in the adjunct model (Dogan, 2003). The adjunct model aims to help tertiary students by involving them in the process of learning English and helping them to improve their skills, academic abilities, and proficiency in language learning and subject area learning. In the adjunct model, two teachers, the language teacher and subject area teacher, are responsible for their own courses, but work jointly to support each other.

There is a focus on the intersection of language, content and thinking objectives in content-based instruction. Some collaborative and cooperative teacher developments that could benefit both teachers and students in an adjunct course include analysis of texts, materials and curriculum; classroom observation, reflection and feedback; collaborative action research and reflection; development of integrated or complementary lessons, materials, or curricula; collaborative or team teaching; and

collaborative university courses for pre-service and in-service teacher education (Crandall, 1998). Service English teachers at English-medium departments can work cooperatively and collaboratively with subject area instructors to meet the students' needs in such a framework.

Implications for Subject Area Instructors

First, subject area instructors need to be educated about what EPS can accomplish realistically. Currently, EPS provide students basic language skills in addition to EAP. In particular, the Reading Course at EPS is designed to help students develop general purpose reading skills with an emphasis on vocabulary. Therefore, the subject specific needs of students in terms of required reading strategies and vocabulary should be supported at content courses.

In addition to work with Service English teachers to help students deal with problems, content instructors need to be educated about how they can guide students in their courses. Currently, instructors help students in different ways such as preparing handouts, presentations with OHTs or Power Point slights, using board, Turkish clarification or designing a web page with summaries and guiding questions that students can use whenever they need. These instructors should be supported and be suggested as a model for other instructors.

Moreover, subject area instructors need training on how they can help students more effectively. In addition to some strategies that some subject area instructors currently use, Angelo and Cross (1993) suggest some techniques for content teachers to develop a better understanding of college students such as background knowledge probe and memory matrix. These techniques present practical ways to content teachers to

assess learners' background or understanding and develop thinking abilities that are required of students at AU according to the interview findings (See Appendix J for a sample technique).

Limitations of the Study

The study was conducted in the English-medium faculties of Anadolu University, with twenty participants for the interviews, and thirteen participants for the questionnaire; hence, the results of the study are only applicable to the participants at that institution who actually completed the questionnaire and returned them for analysis. Furthermore, the study only focused on first year, first term subject area courses as the requirements for these courses are the first requirements for students after Preparatory School.

Another limitation of the study is that neither classroom observation was conducted, nor interviews were held with students to discover their actual reading difficulties and reasons for being unsuccessful with reading tasks. Subject area instructors are the only secondary sources of information regarding students' difficulties with reference to academic reading tasks. Data from the students would have been more meaningful in order to examine in depth the difficulties they face.

The last limitation was related to the reading volume. It was reported that students were unable to meet the reading requirements of subject area instructors, but there was no evidence about how much reading was required from students for each course or assignment.

Implications for Further Research

This study looked at subject area instructors' perspectives only. As a follow up study, research could be conducted examining the students' perspective. Student difficulties regarding academic reading tasks and the reasons for these difficulties could be gathered from students who actually deal with tasks in English-medium courses. The research might include the subject area instructors in upper level classes to discover whether the requirements and student difficulties differ at higher levels.

During the interviews, subject area instructors emphasized other factors, like anxiety and motivation, that may cause students not to meet the requirements. A further study may explore these other factors that affect reading.

Conclusion

This study revealed academic reading requirements of first-year, first-term subject area instructors with a close analysis of textbooks. The subject area instructors basically require students to read and understand the textbook very well. Then, they expect students to analyze, synthesize, make comments on and discuss the gathered data. Students generally have problems with reading comprehension due to inadequate reading practice and vocabulary knowledge. Upper Intermediate level reading course content and the course book, *Mosaic I*, meets many of the requirements of the subject area instructors. However, the findings of this study suggest that students need extra training with academic reading and vocabulary. The supporting supplementary materials must be similar in text type, readability, and vocabulary to the introductory texts required in departments in terms of text features and vocabulary frequency.

REFERENCES

- Aebbersold, J. A. & Field, M. L. (1997). *From reading to reading teacher*. Cambridge: Cambridge University Press.
- Alvermann, E. D., & Phelps, S. F. (2002). *Content reading and literacy*. N.Y.: Allyn & Bacon.
- Anderson, N. (1999). *Exploring second language reading*. Rowley, MA: Heinle & Heinle.
- An, J. H. (1992). *Effects of the text structure-based reading strategy on the comprehension of EFL classroom text*. Germany: Verlag Peter Lang GmbH.
- Angelo, T. A. & Cross, K.P. (1993). *Classroom assessment techniques*. San Francisco: Jossey-Bass.
- Arik, S. (2002). *An investigation into the requirements of discipline teachers for academic English language use in a Turkish medium university*. Unpublished master's thesis, Bilkent University, Ankara, Turkey.
- Belcher, D. & Hirvela, A. (2001). *Linking Literacies*. Ann Arbor, MI: University of Michigan.
- Bell, T. (1998). *A description of the skill-based EAP training for pre-Departure students at the British Council in Jakarta*. Retrieved January 1, 2002 from <http://iteslj.org/Articles/Bell-EAP.html>.
- Biber, D., & Conrad, S. (2001). Quantitative corpus-based research: much more than bean counting. *TESOL Quarterly*, 35, 331-336.
- Biber, D., Conrad, S., & Reppen, R. (1998). *Corpus linguistics: investigating language structure and use*. Cambridge: Cambridge University Press.
- Brown, J. D. (1995). *The elements of language curriculum*. Boston: Heinle & Heinle.
- Brown, J. D. (2001). *Using surveys in language programs*. Cambridge: Cambridge University Press.
- Carkin, S. (2005). English for academic purposes. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning*. (pp. 85-98). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

- Carrell, P.L., & Carson, J. G. (1997). Extensive and intensive reading in an EAP setting. *English for Specific Purposes*, 16, 47-60.
- Carrel, P. L., Devine, J., & Eskey, D. E. (1995). *Interactive Approaches to Second Language Reading*. Cambridge: Cambridge University Press
- Celce-Murcia, M. & Olshtain, T. (2000). *Discourse and context in language teaching. A guide for language teachers*. Cambridge: Cambridge University Press.
- Chun, D. M. (1997). Reserch on text comprehension in multimedia environments. *Language Learning and Technology*, 1, 60-81.
- Coady, J. (1993). In T. Huckin., M. Haynes., & J. Coady (Ed.), *Second language reading and vocabulary learning*. (pp. 3-23). Norwood, NJ: Ablex Publishing Corporation.
- Cobb, T. & Horst, M. (2001). Growing academic vocabulary with a collaborative online database. In B. Morrison, D. Gardner, K. Koebke, & M. Spratt (Eds.), *LT Perspectives on IT & Multimedia* (pp. 189-226). Hong Kong: Polytechnic University Press.
- Cobb, T. & Horst, M. (2001). Reading academic English. In J. Flowerdew & M. Peacock (Eds.), *Research perspectives on English for academic purposes* (pp: 315-329). Cambridge: Cambridge University Press.
- Cohen, S. E., Krischner, M., Wexler, C. (2001). Designing EAP courses at the university level. *English for Specific Purposes*, 20, 367-386.
- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly* 34, 213-237.
- Dudley-Evans, T. (1998). *Developments in English for specific purposes*. Cambridge: Cambridge University Press.
- Dudley-Evans, T. & St John, M. J. (1998). *English for specific purposes: A multi disciplinary approach*. Cambridge: Cambridge University Press.
- Dogan, E. B. (2003). *Integrating language and content learning objectives : the Bilkent University adjunct model*. Unpublished master's thesis, Bilkent University, Ankara, Turkey.
- Flowerdew, J. & Peacock, M. (2001). Issues in EAP: A preliminary perspective. (pp: 8-24) *Research Perspectives on English for academic purposes*. Cambridge: Cambridge University Press.

- Graves, D. (2000). *Designing language courses*. Boston: Heinle & Heinle Publishers.
- Grabe, W. (1991). Current developments in second language reading research. *TESOL Quarterly*, 25, 375-406.
- Grabe, W. & Stoller, F. L. (2002). *Teaching and researching reading*. London: Pearson Education.
- Güler, C. (2004). *An investigation into the academic English language needs of Students at Yıldız Technical University and disciplinary teachers' attitudes towards English-medium instruction at the tertiary level*. Unpublished master's thesis, Bilkent University, Ankara, Turkey.
- Heatley, A. and Nation, P. (1994). *Range*. Victoria University of Wellington, NZ. [Computer program, available at <http://www.vuw.ac.nz/lals/>.] Adapted for WWW by T. Cobb as *Vocabprofile* [<http://www.lex tutor.ca/vp/>].
- Hutchinson, T., & Waters, A. (1987). *English for specific purposes*. Cambridge: Cambridge University Press.
- Hyland, K. (2002). Specificity revisited: how far should we go now? *English for Specific Purposes*, 21, 385-395.
- Hyland, K. & Hamp-Lyons, L. (2002). EAP: issues and directions. *English for academic purposes*, 1, 243-267.
- Johns, A. M. (1981). Necessary English: A faculty survey. *TESOL Quarterly*, 15, 51-59.
- Jordan, R. R. (1987). *English for academic purposes: A guide and resource book for teachers*. Cambridge: Cambridge University Press.
- Kern, R. (2000). *Literacy and language teaching*. Hong Kong: Oxford University Press.
- Larsen-Freeman, D. (2000). *Techniques and principles in language teaching*. Oxford: Oxford University Press.
- Levine, A.; Ferenz, O. & Reves, T. (2000). EFL academic reading and modern technology: how can we turn our students into independent critical readers? *TESL-EJ Teaching English as a Second or Foreign Language*, 4(4).

- McCarthy, M. (1991). *Discourse Analysis for Language Teacher*. Cambridge: Cambridge University Press.
- McCarthy, M. & Carter, R. (1994). *Language as discourse: Language Teaching*. New York: Longman.
- McWhorter, K. T. (1994). *Academic Reading*. New York: Harper Collins College Publishers.
- Mohan, B. (1990). *Proceedings of the First Research Symposium on Limited English Proficient Student Issues*. OBEMLA, 1990.
- Nation, I.S.P.(1990). *Teaching and learning vocabulary*. Boston, Mass: Heinle & Heinle Publishers.
- Nation, P. (2001). *Learning Vocabulary in Another Language*. Cambridge, Cambridge University Press.
- Nation, P & Waring, R. (2001) vocabulary size, text, text coverage and word lists. In . In N. Schmitt & M. McCharthy (Ed.), *Vocabulary: Description, acquisition, and pedagogy*. (pp.6–19) Cambridge: Cambridge University Press.
- Nurweni, A., & Read, J. (1999). The English vocabulary knowledge of Indonesian students. *English for Specific Purposes*, 18, 161-175.
- Richards, J. C. (2001). *Curriculum development in language teaching*. Cambridge: Cambridge University Press.
- Short, D. J. (2000). The ESL standards: Bridging the academic gap for English language learners. *Washington DC: ERIC Clearinghouse on Languages and Linguistics*. (ERIC Document Number: ED 447728).
- Silberstein, Sandra. (1994). *Teaching and resources in teaching reading*. New York: Oxford University Press.
- Snow, A. M. (2001). Content-based and immersion models for second and Foreign language teaching. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (pp. 303-318). Boston: Heinle & Heinle.
- Sowden, C. (2003). Understanding academic competence in overseas students in the UK. *ELT Journal*, 57, 377-385.
- Swaffar, J. K. (1988). Readers, texts, and second languages: the interactive processes. *The Modern Language Journal*, 72, 123-149.

Swales, J. M. (1990). *Genre analysis*. Cambridge: Cambridge University Press.

Syosoyev, P. V. (2000). Developing an English for specific purposes course using a learner centered approach: A Russian experience. Retrieved March, 2000 from <http://iteslj.org/Techniques/Syosev-ESP.html>.

Thomson, I (1998). Reading research and its curricular implications. *The Slavic and East European Journal*, 32, 617-642.

APPENDICES

APPENDIX A

QUESTIONNAIRE

NEEDS ASSESSMENT OF ACADEMIC READING TASKS AND CLOSE ANALYSIS OF ACADEMIC READING TEXTS AT ANADOLU UNIVERSITY

Dear Colleague,

This questionnaire is prepared to gather data for the thesis research I am conducting this year as a graduate student in the Bilkent MA TEFL Program. This study aims to investigate the requirements of subject area teachers' in terms of reading tasks in the first year English medium courses. This study will also examine linguistic characteristics of texts from different fields based on readability and vocabulary levels.

The first part of the questionnaire is allocated to the questions related to your background. The second part of the questionnaire consists of the questions related to a course that you instruct in English. The third part of the questionnaire asks about different text types that you require from your students to read in their fields. The fourth part of the questionnaire consists of the academic reading purposes that you require from your students in English. The final part includes knowledge structures in academic reading texts and the difficulties of your students.

Your responses will be confidential. Your identity will not be revealed in any report or article deriving from this research. Thank you for your contribution and time.

Yours sincerely,

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A. Personal Information

1. Faculty

☐ Economics and Administrative Sciences

Department: _____

☐ Engineering and Architecture

Department: _____

☐ Science

Department: _____

☐ Communication Sciences

Department: _____

☐ Fine Arts

Department: _____

☐ School of Civil Aviation

Department: _____

2. Academic Title

a. Lecturer

b. Associate Professor

c. Professor

d. Other: _____

3. How long have you been teaching the courses in English?

a. Less than one year

b. 1-5 years

c. 6-10 years

d. 11-15 years

e. 16-20 years

f. More than 20 years

B. Specific Course Information

For this section, please choose one course which you taught primarily in English in 2004 Fall Term at undergraduate level.

Title of course(s) _____

C. Reading Texts

Which of the following types of material in English are assigned as required reading in your course for undergraduate students? (For each question please circle the number corresponding to your answer.)

Text Types	Never	Sometimes	Often	Always
1. text book	1	2	3	4
2. lecture handout	1	2	3	4
3. web-based articles	1	2	3	4
4. articles from professional journals	1	2	3	4
5. articles from periodicals and magazines	1	2	3	4
6. technical reports	1	2	3	4
7. laboratory or computer manuals	1	2	3	4
8. reading texts as part of exam questions	1	2	3	4
9. exam questions	1	2	3	4
10. newspapers	1	2	3	4

Other(s) & Comments (Please specify in detail)

D. Reading Purposes

To what extent do your students need the following academic reading purposes in English? For each question please circle the number corresponding to your answer.

Academic Reading Purposes	Not	Not very	Important	Very important
1. To get the general idea of the text	1	2	3	4
2. To find specific information in a text	1	2	3	4
3. To make a summary of a text	1	2	3	4
4. To identify author's point of view	1	2	3	4
5. To identify important information in the text	1	2	3	4
6. To paraphrase some information in the text	1	2	3	4
7. To make inferences to get implied message in a text	1	2	3	4

E.

Knowledge Structures

The following framework of “knowledge structures” (Mohan, 1990) has been widely used to describe typical kinds of reading from many academic areas. A table of these knowledge structures and how they might appear in reading topics from a course in Economics is given below. I would like to know which of these kinds of reading content are typical of your own academic area and what types readings are most difficult for your students?

KNOWLEDGE STRUCTURES	
Classifications/Concepts	Types of industry in Eskisehir
Description	Describing a branch of industry in Eskisehir
Sequence	Year by year growth of industrial activity along the industrial framework and detecting the expectations
Principles	Examining the principle of supply and demand to production.
Evaluation	Judging the study process
Choice/Decision	Bringing up the industrial subjects, location and marketing and choosing the appropriate ones.

A) Please circle the kinds of reading content that are typical of my own academic area;

	Very typical	Typical	Sometimes	Rare
1) Classifications/Concepts	1	2	3	4
2) Description	1	2	3	4
3) Sequence	1	2	3	4
4) Principles	1	2	3	4
5) Evaluation	1	2	3	4
6) Choice/Decision	1	2	3	4

B) Please circle the appropriate knowledge structure types that students have most difficulty with reading;

	Most difficulty	Some difficulty	With effort	No difficulty
1) Classifications/Concepts	1	2	3	4
2) Description	1	2	3	4
3) Sequence	1	2	3	4
4) Principles	1	2	3	4
5) Evaluation	1	2	3	4
6) Choice/Decision	1	2	3	4

F. If you have any further comments about the requirements and the difficulties of academic reading skills in English with reference to your students, please indicate them below.

APPENDIX B

ANKET

ANADOLU ÜNİVERSİTESİ'NDE AKADEMİK OKUMA BECERİLERİ KAPSAMINDA İHTİYAÇ SAPTAMASI VE AKADEMİK OKUMA PARÇALARININ ANALİZİ

Değerli Öğretim Üyesi/ Elemanı,

Bu anket Bilkent Üniversitesi İngilizce Öğretimi Yüksek Lisans Programı'nda yürütmekte olduğum tez araştırması için veri toplamak amacıyla hazırlanmıştır. Bu araştırma, farklı bölümlerde İngilizce eğitim veren öğretim elemanlarının 1. sınıf öğrencilerinden özellikle 1. dönem içerisinde beklediği okuma becerilerini saptamayı hedeflemektedir.

Bu hedef kapsamında, İngilizce eğitim veren öğretim elemanları ile görüşmeler yapılacak, anket çalışması uygulanacak, ders programı ve sınav örnekleri incelenecektir. Ayrıca farklı alanlardan toplanan okuma metinleri okunabilirlik ve kelime düzeylerini saptamak için dilbilimsel açıdan analiz edilecektir.

Anket 6 bölümden oluşmaktadır. Bölümleri içeriği:

- A Bölümü: Kişisel bilgiler
- B Bölümü: İngilizce olarak yürüttüğünüz derse ait bilgiler
- C Bölümü: Kendi alanınızda öğrencilerinizden okumalarını beklediğiniz metinler
- D Bölümü: Akademik okuma becerileri kapsamında öğrencilerinizden başarmalarını beklediğiniz hedefler
- E Bölümü: Her akademik metinde bulunan bilgi kalıplarını açıklayan örnek
 - i. Alt başlık: akademik alanınızda yer alan bilgi kalıplarını
 - ii Alt başlık: öğrencilerinizin zorluk çektiği bilgi kalıpları

Yanıtlarınız gizli kalacaktır. Bu araştırma sonucunda hazırlanacak olan hiçbir raporda ve makalede kimlik bilgileriniz yer almayacaktır. Katılımınız ve zamanınız için çok teşekkür ederim.

Saygılarımla,

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A. Kişisel Bilgi

1. Fakülte

() İktisadi İdari İlimler Fakültesi

() Bölüm: _____

() Mühendislik ve Mimarlık

() Bölüm: _____

() Fen Fakültesi

() Bölüm: _____

() İletişim Bilimleri Fakültesi

() Bölüm: _____

() Güzel Sanatlar Fakültesi

() Bölüm: _____

() Sivil Havacılık Yüksekokulu

() Bölüm: _____

2. Akademik Unvan

a. Öğr. Gr.

b. Yard. Doç. Dr.

c. Doç. Dr.

d. Prof. Dr.

e. Diğer _____

3. Ne kadar süredir İngilizce eğitim veriyorsunuz?

a. 1 yıldan daha az

b. 1-5 yıl

c. 6-10 yıl

d. 11-15 yıl

e. 16-20 yıl

f. 20 yılın üzerinde

B. Ders Hakkında Bilgi

Bu bölüm için lütfen 2004 güz dönemi lisans programında İngilizce olarak yürüttüğünüz dersi/ dersleri belirtiniz.

Dersin Adı _____

E. Okuma Metinleri

Aşağıdaki tabloda sunulan İngilizce okuma metinleri bölümünüzdeki öğrencilerin ihtiyaçlarını ne ölçüde kapsamaktadır? Lütfen bu soruyu aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakamlara karşılık gelen rakamı yuvarlak içine alarak cevaplayınız.

	Hiçbir	Bazen	Sıkça	Her zaman
1. Ders kitabı	1	2	3	4
2. Ders notları	1	2	3	4
3. İnternet referanslı makaleler	1	2	3	4
4. Akademik / profesyonel dergilerden alınan makaleler	1	2	3	4
5. Süreli yayın ve dergilerden alınan metinler	1	2	3	4
6. Teknik raporlar	1	2	3	4
7. Talimat/ kullanıcı broşürleri	1	2	3	4
8. Sınav soruları kapsamındaki metinler	1	2	3	4
9. Sınav soruları	1	2	3	4
10. Gazeteler	1	2	3	4

Diğer metin tipleri ve yorumlarınız (Lütfen detaylı bir şekilde belirtiniz)

F. Okuma Hedefleri

Öğrencileriniz derslerinizle ilgili çalışmalarını için aşağıdaki okuma becerisi hedeflerinden her birine ne kadar ihtiyaç duymaktadır? Lütfen bu soruyu aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakamlara karşılık gelen rakamı yuvarlak içine alarak cevaplayınız.

Akademik Okuma Hedefleri	Önemli Değil	Çok Önemli	Önemli	Çok Önemli
1. Metindeki ana fikri bulmak	1	2	3	4
2. Metindeki detay bilgileri bulmak	1	2	3	4
3. Metni özetlemek	1	2	3	4
4. Metindeki önemli, vurgulanan bilgileri bulmak	1	2	3	4
5. Metindeki bilgileri farklı kelimelerle açıklamak	1	2	3	4
6. Metinde ima edilen bilgiler hakkında çıkarım yapmak	1	2	3	4
7. Yazarın görüşünü bulmak	1	2	3	4

G. Bilgi Yapıları

Aşağıda sunulan “bilgi yapıları” (Mohan,1990) çizelgesi akademik okuma parçalarının tipik özelliklerini tanımlamak amaçlı kullanılmaktadır. Aşağıda örnek olarak bu bilgi yapılarının tablosu ve İktisat dersinden alınmış bir okuma metni için nasıl kullanılabileceği verilmiştir. Sizin akademik alanınızda bu okuma alanlarından hangilerine yer verilmektedir ve öğrencileriniz için hangi yapılar daha zorlayıcıdır?

BİLGİ ÇİZELGESİ	
SINIFLANDIRMA/ KONSEPT	Eskişehir’de yatırım alanlarının araştırılması
TANIMLAMA	Yatırım alanlarından birine yoğunlaşılması
SIRALAMA	Yatırım alanı ile ilgili geçmişteki oluşumların incelenmesi ve beklentilerin belirlenmesi
İLKELER	Yatırım alanı ile ilgi arz ve talep arasındaki ilişkinin incelenmesi
DEĞERLENDİRME	Araştırma sürecinin değerlendirilmesi
SEÇENEK/ KARAR	Yatırımın konusu, yeri ve pazarı ile ilgili seçeneklerin ortaya konması ve uygun olanın tercih edilmesi

i) Alanınızdaki akademik okuma metinlerinde aşağıdaki bilgi yapılarından hangileri ne sıklıkta yer almaktadır?

BİLGİ ÇİZELGESİ	Çok tipik bir özellik	Tipik bir	Arada ortaya çıkan bir özellik	Nadir bir özellik
7) Sınıflandırma/ Konsept	1	2	3	4
8) Tanımlama	1	2	3	4
9) Sıralama	1	2	3	4
10) İlkeler	1	2	3	4
11) Değerlendirme	1	2	3	4
12) Seçenek/Karar	1	2	3	4

ii) Akademik okuma metinlerinde yer alan bilgi yapılarından hangileri öğrencilerinizi ne ölçüde zorlamaktadır?

BİLGİ ÇİZELGESİ	Çok zor	Biraz zor	Çaba gerektiriyor	Zor gelmiyor
1) Sınıflandırma/ Konsept	1	2	3	4
2) Tanımlama	1	2	3	4
3) Sıralama	1	2	3	4
4) İlkeler	1	2	3	4
5) Değerlendirme	1	2	3	4
6) Seçenek/Karar	1	2	3	4

F. İngilizce akademik okuma becerilerine ilişkin öğrencilerinizden beklediğiniz hedefler ve öğrencilerinizin zorluk çektiği konular hakkında eklemek istediğiniz yorumlarınızı lütfen detaylı bir şekilde yazınız.

APPENDIX C

INTERVIEW QUESTIONS

English Version

1. What are your expectations and requirements of students in reference to academic reading?
2. To what extent can the students fulfill your expectations? What is actual student behavior in your classes? (How does this relate to reading?)
3. Based on your observation and personal evaluation of student behavior, what difficulties do students have with reference to academic reading?
4. Do you do anything additional to help students cope with the reading load?

Turkish Version

1. Akademik okuma becerileri kapsamında öğrencilerinizden beklentilerinizin nelerdir?
2. Öğrencileriniz bu beklentilerinizin ne kadarını karşılayabilmektedirler?
3. Gözlem ve bireysel değerlendirmenize dayalı olarak öğrencilerinizin karşılaştığı okuma güçlükleri nelerdir?
4. Öğrencilerinizin okuma yükümlülükleri ile başa çıkmaları konusunda onlara yardımcı olacak ek hazırlıklar yapıyor musunuz?

APPENDIX D
MÜLAKAT YAZILI METNİ VE KODLAMASI

Fakülte: İktisadi İdari Bilimler Fakültesi Bölüm: İngilizce İktisat Ders: İktisata Giriş Katılımcı No: 12	Coding
I: Hocam, öğrencilerinizden beklediğiniz okuma becerileri kapasamında örnekler nedir? Mesela okuduğunu analiz etmesi, yada okuduğunu özetlemesi, yada sunum yapması, tartışması, problem çözmesi şeklinde. P: <u>Ya bir kere özellikle okuma deyince tabi dersin içeriği gereği, giriş Intruduction to Economis olduğu için ellerindeki zorunlu ders kitabı ve ona alternatif olarak ellerinde yararlı olabilecek okuma listesi. Yani. Chapter'ı iyi okuyup, Chapterdaki ana tartışma konularını iyi anlayıp, ona göre bir takım çıkarım yapma işlemlerine özellikle baştan bu zamana kadar baktığımda daha da kötü oluyor bu şey. Etkinlikleri.</u> I: Sizin beklentileriniz karşılamıyor öğrenciler. P: Hayır, hayır. <u>Bu sadece okuma becerileri ile ilgili değil, yani genel olarak bile İngilizce ile yaşadıkları sorunlarla ilgili yanılmıyorsam.</u> I: Anladım. P: Aynı şeyleri yazmada da var. Konuşmada da var. I: Peki şöyle özetleyebilir miyiz? <u>Öğrenci okuduğunu anlamıyor, ki bunu konuşmaya ve yazmaya transfer etsin.</u> P: <u>Yani evet. Hem de çoğu için, hepsi için olmasa bile.</u> I: Evet. P: Yani o doğru. İyi bir gözlem. I: Anlıyorum. Peki hocam sizin sınav örneklerinizi almıştım. P: <u>Mesela sınavda örneğin başarısız olanların çoğu sınav sorularının anlamamaktan kaynaklanıyor.</u> I: Anlıyorum. P: Konuyu bilse bile. I: Hocam geçen yılın sınavlarına bakma şansım olmuştu. Vermiştiniz. Çok teşekkürler. Orada anladığım kadarıyla öğrencinin aldığı bilgiyi özümsemesi ve uygulaması. P: Evet, analitik sorular. Kesinlikle. I: Yani <u>sorduğunuz sorular sadece öğrencinin bilgisini ölçmüyor.</u> P: Yok. I: <u>Bilgi, artı bu bilgiyi uygulamasını ölçüyor.</u> P: Tabi. Yani <u>descriptive türden soru sormuyoruz. Daha çok analitik yani anailze dönük. Bilgi kullanımı amaçlı sorular olduğu için bunun da tabi ilk aşaması iyi okumaktan geçiyor. Okuduğunu anlamaktan. O yüzden zorlanıyorlar.</u>	Ders içeriği, Ders kitabı, Ek materyaller, okuma ödevi Genel problem: İngilizce eksikliği Okuma yetersizliği: diğer becerileri etkiliyor Sınavda başarısızlık: Soruları anlamamak Sınav sorusu niteliği: bilgi+yorumlama Soru tipi: analitik & iyi bir okuma gerektiriyor

APPENDIX E

INTRVIEW TRANSCRIPTION AND CODING

Faculty: Aconomics and Administrative Sciences Department: Economics Course: Introduction to Economics Participant Number: 12	Coding
I: Dear colleague, what are the reading requirements in your course? Could you give some samples? For instance, reading to analyze, reading to summarize, present or discuss what he read, or to solve a problem. P: Particularly in terms of reading, because of the content of the course, Introduction to Economics, they have the compulsory textbook. In addition to this, they have the alternative reading list that would be beneficial for them. <u>They are required to read and comprehend the main discussion points about the topic very well, then they are required to come to a conclusion. When I observe the students and our requirements, it has been worse since the begining. They are not effective.</u> I: Students do not meet your expectations/ requirements. P: No, no. <u>This is not just related to reading. If I'm not mistaken, they have a problem with English in general.</u> They have the same problem with speaking and writing. I: So, <u>can we say that students are unable to read and comprehend what he reads, therefore they fail to transfer the information into other skills like writing and speaking.</u> P: Well, yes. For the majority of them it is the same even though it not the same for all of them. That is true. It is a good observation. I: I see. Dear colleague, I collected your exam samples. P: For instance, <u>the reason why students fail from exams is that students do not understand exam questions.</u> P: Even though he knows about the topic. I: I had a chance to look at last year's exam questions that you gave. Thank you for that. As far as I infered from those exam questions, students are required to induce the new information and apply it in some way P: Yes, <u>the questions are analytical.</u> Certainly. I: So, the questions you ask are not only knowledge questions. M: No. I: <u>They include both the knowledge and being able to use that knowledge.</u> P: Sure. <u>It means that we do not ask descriptive type of questions. The questions are analytical. As the aim of the questions is to use the information, the first step is to read and comprehend very well. They have difficulties for this.</u>	Content of the course, text book, extra materials, reading assignments Problem: English background Reading difficulty: information transfer Failure in exam: Sts do not understand exam questions Exam Question types: Analytical: requires reading very well, using the knowledge

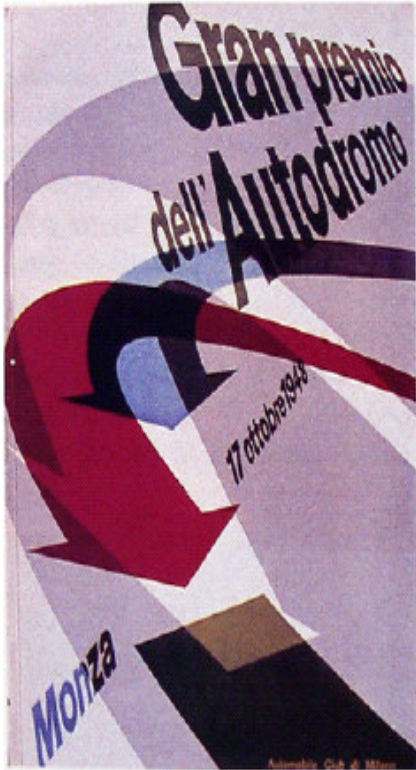
APPENDIX F

SAMPLE PRESENTATION HANDOUTS

Gra302
HISTORY OF GRAPHIC DESIGN II
Dr. Christopher
INTERNATIONAL TYPOGRAPHIC STYLE

THE ULM INSTITUTE OF DESIGN
ULM UNIVERSITY
DESIGN SCHOOL
ULM, GERMANY

The Ulm Institute of Design



Max Huber, poster for automobile races, 1948.

The Ulm Institute of Design included a study of semiotics, the general philosophical theory of signs and symbols, in its curriculum. Semiotics has three branches: *semantics*, the study of the meaning of signs and symbols; *syntactics*, the study of how signs and symbols are connected and ordered into a structural whole; and *pragmatics*, the study of the relation of signs and symbols to their users. Also, principles of Greek rhetoric were reexamined for application to visual communications.

Navigation icons: back, forward, search, and other controls.

Accounting Principles, 7th Edition

Weygandt • Kieso • Kimmel

Chapter 12

Accounting Principles

Prepared by Naomi Karolinski
Monroe Community College
and

Marianne Bradford
Bryant College

John Wiley & Sons, Inc. © 2005

CHAPTER 12

ACCOUNTING PRINCIPLES

After studying this chapter, you should be able to:

- 1** Explain the meaning of generally accepted accounting principles and identify the key items of the conceptual framework.
- 2** Describe the basic objectives of financial reporting.
- 3** Discuss the qualitative characteristics of accounting information and elements of financial statements.

OUTLINE

- Thermochemistry?
- What is Energy ?
- Kinetic and Potential Energy
- Kinetic Theory of Matter
- Energy Changes in Chemical Reactions
- Heats of Reaction: Calorimetry
- Enthalpy changes
- Standard Heats of Formation and Hess's Law



2

Thermochemistry

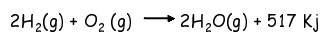
- Thermo: heat
- Chemistry: chemical rxns
- Thermochemistry: relationship between energy and chemical rxns.



3



Hindenburg airship (1937)



4

APPENDIX G
VOCABPROFILER OUTPUT

[Home](#) > [VocabProfile](#) > VP output

WEB VP OUTPUT FOR FILE: mosaic

Recategorized words: None

Note: In the output text, punctuation (but not sentence capitalization) is eliminated; figures (1, 20, etc) are replaced by the word *number*; contractions are replaced by constituent words; type-token ratio is calculated using constituents; and in the 1k sub-analysis content + function words may sum to less than total (depending on user treatment of proper nouns, and program decision to class numbers as 1k although not contained in 1k list).

	<u>Families</u>	<u>Types</u>	<u>Tokens</u>	<u>Percent</u>		
First 500:	...	...	(782)	(64.26%)	Words in text (tokens):	1217
K1 Words (1 to 1000):	266	331	937	76.99%	Different words (types):	556
Function:	...	...	(481)	(39.52%)	Type-token ratio:	0.46
Content:	...	...	(449)	(36.89%)	(Tokens per type:	2.19)
					Function-content ratio:	0.40
K2 Words (1001 to	45	48	55	4.52%		
2000):					Onlist Tokens:	1068
AWL					Onlist Types:	433
Words	48	54	76	6.24%	Onlist Type-Token:	0.41
(academic):					Onlist Families:	359
Off-List	<u>?</u>	<u>123</u>	<u>149</u>	<u>12.24%</u>	Onlist Family/token:	0.34
Words:					Onlist Family/type:	0.83
	359+?	556	1217	100%		

Output text: Read Timed Reading The following magazine article discusses one of the biggest environmental problems in the world today Use it as a means to practice reading fast under a time constraint First skim the quiz at the end to see what kinds of questions you will be asked Then read the article quickly and check your comprehension by taking the quiz at the end Be sure to do the easy ones first as suggested in the Focus on Testing on page number and then go back for the harder ones Use a watch to time yourself Fill in the following blanks Time begun Time finished hour minutes hour minutes Down the

Drain The Coming World Water Crisis A roadside village between New Delhi and Agra India is obscured by clouds of dust and smoke from passing trucks and scooters Between an open air restaurant and a tire changing shop is a stagnant pond its banks bare of vegetation Bright green algae the color of artificial turf floats on the surface which is periodically disturbed by splashing children and thirsty cows There nothing unique about this contaminated water supply the scene is repeated hundred of thousands of times throughout the world Our beleaguered planet is in the midst of an acute fresh water crisis that is likely to intensify in the coming years exacerbated by global warming industrial pollution high tech agriculture misplaced development priorities and the steady pressure of exploding populations Fresh water is the most finite of finite resources constituting just number number percent of the planet total moisture with two thirds of that supply entombed in glaciers A mere number number percent of the earth water is part of the hydrologic cycle meaning it falls as precipitation Of that tiny percentage two thirds evaporates or is used by plants The rest so-called runoff is what is left to fill our rivers streams and aquifers In water scarce California more than number percent of that limited resource goes to agriculture energy production recreation and the need to ensure adequate water flow Cities get less than number percent of that total As California goes so goes the rest of the world Agriculture consumes number percent of all the water that people take out of rivers and streams or pump from underground according to a number article in Science magazine Twenty two percent goes to industry A mere number percent is left over for towns and cities It takes number number gallons of water to supply a single person with a modest low meat diet for a year To grow just one ton of grain farmers need to use number number tons of water In her book Last Oasis Facing Water Scarcity Sandra Postel director of the Global Water Policy Project predicts that providing drinking water for the number number billion people expected to be added to the world population in the next number years would take resources equivalent to number Nile or number Colorado rivers It is not at all clear where that water could come from on a sustainable basis she says Because of our chronic misuse of water shortages loom around the world Based on a subsistence level of number number cubic meters of water per person per year the World Bank estimates that number countries have scarce water resources mostly in Africa and the Middle East The U N Food and Agriculture Organization predicts a worsening in food security in Sub Saharan Africa because irrigated farmland is disappearing and grain imports are growing By number Postel estimates number number billion Africans or three quarters of the continent population will be living in water stressed countries Unsanitary water is responsible for as much as number percent of all disease in the developing world and around number million deaths a year according to Alan Dupont of Australia Strategic Defense Studies Center Writing in a recent issue of the Straits Times a Singapore newspaper he asks Will future wars be fought over increasingly scarce fresh water resources it is becoming a common question Former U N Secretary General Boutros Boutros Ghali has predicted that the next war in the Middle East will be over the waters of the Nile not politics The world cities are projected to gain more than number billion people the population of India and China combined by number and it is unknown whether the water resources exist to serve them We can see examples of cities collapsing in the developing countries because the water is no longer useable says Malin

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Sublist 1

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Sublist 2

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Sublist 5

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Sublist 7

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Sublist 8

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Sublist 10

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Type List

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see_[2] serve_[1] share_[1] she_[1] signs_[1] simply_[1] single_[1] six_[1] so_[2]
some_[1] speaking_[1] started_[1] stored_[1] stream_[1] streams_[4] studies_[1]
suggested_[1] supply_[4] supported_[1] sure_[1] surface_[1] take_[2] takes_[1]
taking_[1] testing_[1] than_[5] that_[15] the_[73] their_[2] them_[3] then_[2] there_[2]
these_[1] they_[2] things_[1] thirds_[2] this_[2] though_[1] thousands_[1] three_[2]
through_[1] throughout_[1] time_[4] times_[3] to_[29] today_[3] together_[1] ton_[1]
tons_[1] too_[1] total_[2] towns_[1] true_[1] twenty_[1] two_[4] u_[3] under_[2]
unknown_[1] unless_[1] use_[4] used_[1] users_[1] views_[1] village_[1] war_[1]
wars_[1] was_[1] watch_[1] water_[31] waters_[1] we_[3] were_[2] what_[2]

where_[1] whether_[1] which_[3] who_[1] wild_[1] will_[10] winner_[1] with_[9]
within_[1] work_[2] world_[15] would_[1] writing_[1] year_[4] years_[3] you_[1]
your_[1] yourself_[1]

2k types: [45:48:55] agricultural_[1] agriculture_[4] artificial_[1] bare_[1] billion_[3]
check_[1] clean_[1] cleaner_[1] combined_[1] cows_[1] discusses_[1] disease_[1]
disturbed_[1] during_[1] dust_[1] engineers_[1] especially_[1] exploding_[1] floats_[1]
fold_[1] gallons_[1] grain_[2] ice_[1] international_[1] internationally_[1] meat_[1]
melting_[1] mill_[1] modest_[1] practice_[1] precious_[1] prize_[1] pump_[1]
quickly_[1] repeated_[1] responsible_[1] restaurant_[1] shop_[1] smoke_[1] steady_[1]
taming_[1] thanks_[1] tire_[1] universal_[1] warming_[2] warn_[1] worms_[1]
yellow_[1]

AWL types: [48:54:76] adequate_[1] assembly_[1] co_[1] collapsing_[1]
conference_[1] conflicts_[1] constituting_[1] constraint_[1] consumes_[1] create_[1]
cycle_[1] declining_[1] displace_[1] diversity_[1] energy_[1] ensure_[1]
environmental_[2] equivalent_[1] estimates_[2] exports_[1] finite_[3] focus_[1]
global_[3] instance_[1] intense_[2] intensify_[1] intervention_[1] issue_[1]
minimum_[1] ongoing_[1] percent_[8] percentage_[1] periodically_[1] policy_[2]
predicted_[1] predicts_[2] priorities_[1] project_[1] projected_[1] projects_[1]
releasing_[1] research_[1] resolved_[1] resource_[1] resources_[6] restored_[1]
reverse_[1] security_[1] series_[1] strategic_[1] stressed_[1] sustainable_[1]
ultimately_[1] unique_[1]

OFF types: [?:123:149] acceleration_[1] acute_[1] africa_[2] africans_[1] agra_[1]
alan_[1] algae_[1] american_[1] aquifers_[1] australia_[1] beleaguered_[1] belgium_[1]
biological_[2] blanks_[1] boutres_[1] boutros_[1] california_[2] canadian_[1] china_[3]
chronic_[1] colorado_[2] comprehension_[1] confrontations_[1] contaminated_[1]
continent_[1] cope_[2] corps_[1] crisis_[3] cubic_[1] dam_[1] dams_[3] david_[1]
defense_[1] delhi_[1] deprived_[1] diet_[1] downstream_[1] drain_[1] dupont_[1]
dye_[1] ecosystems_[1] entombed_[1] evaporates_[1] exacerbated_[1] falkenmark_[2]
farmland_[1] florida_[1] ghali_[1] giant_[1] glaciers_[2] gorges_[1] hydrologic_[1]
imports_[1] india_[2] irrigated_[1] juan_[1] kissimmee_[1] loom_[1] magazine_[2]
malin_[1] massachusetts_[1] meters_[1] misplaced_[1] misuse_[1] moisture_[1]
nashua_[1] nile_[2] oasis_[1] objectives_[1] obscured_[1] overfishing_[1] peter_[1]
pharaonic_[1] planet_[2] pollutants_[1] pollution_[3] pond_[1] ponds_[1] postel_[2]
precipitation_[1] professor_[1] proliferating_[1] quiz_[2] recreation_[1] relentless_[1]
reservoir_[1] runoff_[2] saharan_[1] san_[1] sandra_[1] schindler_[2] scooters_[1]
scrutiny_[1] sewage_[1] shortages_[1] singapore_[1] skim_[1] sludge_[1] socalled_[1]
splashing_[1] stagnant_[1] straits_[1] stupefying_[1] sub_[1] subsistence_[1]
swedish_[1] tech_[1] teem_[1] thirsty_[1] timed_[1] tiny_[1] tonge_[1] trucks_[1]
turf_[1] underground_[1] unsanitary_[1] upstream_[2] useable_[1] vastly_[1]
vegetation_[1] volvo_[1] waterways_[1] worsening_[2]

Family List

family_[number of tokens]

1k families: [families 266 : types 331 : tokens 937] a_[32] about_[1] accord_[2] add_[1] adopt_[1] ago_[1] agree_[1] air_[1] all_[3] among_[1] and_[34] any_[1] appear_[1] army_[1] around_[2] article_[3] as_[8] ask_[2] at_[6] back_[1] bank_[2] base_[2] be_[46] because_[6] become_[2] begin_[1] best_[1] between_[3] big_[1] blood_[1] book_[1] bright_[1] build_[3] but_[2] by_[8] can_[2] case_[1] centre_[1] change_[1] child_[1] city_[4] clear_[1] cloud_[1] colour_[1] come_[4] common_[1] could_[1] council_[1] count_[1] country_[6] cut_[1] day_[2] dead_[2] demand_[1] desert_[1] develop_[6] direct_[2] do_[1] down_[1] drink_[1] dry_[1] earth_[1] east_[2] easy_[1] end_[3] equal_[1] example_[1] exist_[1] expect_[1] face_[3] fall_[1] farm_[1] fast_[1] fight_[2] fill_[2] finish_[1] first_[2] flow_[2] follow_[2] food_[3] for_[7] form_[1] former_[1] fresh_[3] from_[5] future_[1] gain_[1] general_[2] get_[1] go_[5] green_[1] group_[1] grow_[2] half_[1] hand_[1] hard_[1] have_[10] he_[1] high_[2] hope_[1] hour_[2] how_[1] human_[1] hundred_[1] important_[1] in_[28] increase_[4] independent_[1] industry_[4] it_[11] just_[3] keep_[1] kind_[1] know_[1] lake_[1] large_[1] last_[1] learn_[2] left_[2] less_[1] level_[1] life_[2] like_[2] likely_[1] limit_[2] live_[3] long_[1] lose_[1] low_[2] many_[1] march_[1] mean_[2] mere_[2] middle_[3] mile_[1] million_[2] minute_[2] more_[4] most_[3] move_[1] much_[1] n_[3] nature_[3] near_[1] need_[2] new_[1] news_[1] newspaper_[1] next_[2] no_[2] not_[4] now_[1] number_[42] observe_[1] of_[51] oil_[1] on_[6] one_[5] open_[1] or_[4] organize_[1] other_[1] out_[1] over_[5] page_[1] paper_[1] part_[1] pass_[1] people_[5] per_[2] person_[2] plant_[1] political_[1] population_[4] press_[1] pressure_[1] problem_[1] product_[1] provide_[1] quarter_[1] question_[2] read_[4] recent_[1] red_[1] rest_[2] ride_[1] right_[1] river_[9] road_[1] run_[1] save_[2] say_[3] scarce_[4] scene_[1] science_[4] secretary_[1] see_[2] serve_[1] share_[1] she_[2] sign_[1] simple_[1] single_[1] six_[1] so_[2] some_[1] speak_[1] start_[1] store_[1] stream_[5] study_[1] suggest_[1] supply_[4] support_[1] sure_[1] surface_[1] take_[4] test_[1] than_[5] the_[73] then_[2] there_[2] they_[7] thing_[1] this_[18] though_[1] thousand_[1] three_[4] through_[2] time_[7] to_[29] today_[3] together_[1] ton_[2] too_[1] total_[2] town_[1] true_[1] twenty_[1] two_[4] u_[3] under_[2] unless_[1] use_[6] view_[1] village_[1] war_[2] watch_[1] water_[32] we_[9] what_[2] where_[1] whether_[1] which_[3] who_[1] wild_[1] will_[10] win_[1] with_[9] within_[1] work_[2] world_[15] would_[1] write_[1] year_[7] you_[3]

2k families: [45:48:55] agriculture_[5] artificial_[1] bare_[1] billion_[3] check_[1] clean_[2] combine_[1] cow_[1] discuss_[1] disease_[1] disturb_[1] during_[1] dust_[1] engine_[1] especial_[1] explode_[1] float_[1] fold_[1] gallon_[1] grain_[2] ice_[1] international_[2] meat_[1] melt_[1] mill_[1] modest_[1] practise_[1] precious_[1] prize_[1] pump_[1] quick_[1] repeat_[1] responsible_[1] restaurant_[1] shop_[1] smoke_[1] steady_[1] tame_[1] thank_[1] tire_[1] universe_[1] warm_[2] warn_[1] worm_[1] yellow_[1]

AWL families: [48:54:76] adequate_[1] assemble_[1] collapse_[1] confer_[1]
conflict_[1] constitute_[1] constrain_[1] consume_[1] cooperate_[1] create_[1]
cycle_[1] decline_[1] displace_[1] diverse_[1] energy_[1] ensure_[1] environment_[2]
equivalent_[1] estimate_[2] export_[1] finite_[3] focus_[1] globe_[3] instance_[1]
intense_[3] intervene_[1] issue_[1] minimum_[1] ongoing_[1] percent_[9] period_[1]
policy_[2] predict_[3] priority_[1] project_[3] release_[1] research_[1] resolve_[1]
resource_[8] restore_[1] reverse_[1] secure_[1] series_[1] strategy_[1] stress_[1]
sustain_[1] ultimate_[1] unique_[1]

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APPENDIX H
MISSION STATEMENT OF
ANADOLU UNIVERSITY ENGLISH PREPARATORY SCHOOL

Mission Statement

Anadolu University, School of Foreign Languages, Basic English Department aims at providing students from various departments and at different language proficiency levels with basic English in a nurturing and supportive teaching and learning environment to comprehend and react to what they read and hear, and to express themselves through written and oral language so that students can communicate effectively in various (their) academic, professional and social contexts.

A further aim of the Basic English Department is to broaden students' vision by encouraging them to become autonomous learners who are competent in pursuing the advances in the international academic and scientific arena.

APPENDIX I
ANADOLU UNIVERSITY
SCHOOL OF FOREIGN LANGUAGES
2004-2005 FALL TERM
UPPER INTERMEDIATE LEVEL READING SYLLABUS

Course book : Mosaic 1

Course Description:

This course is designed to help students develop general-purpose reading skills with an emphasis on vocabulary reading strategies to enable them to read a text with adequate understanding, which is essential for success in university level courses. These skills and strategies are presented through a variety of high-interest readings which offer activities to develop reading skills and encourage discussion. This course also aims at establishing a positive attitude towards reading to enhance reading facility, developing good reading habits and therefore encouraging a liking for reading. Timed reading and speed reading activities are also used to increase reading fluency.

Course Aim:

Goal 1- To help learners employ reading strategies appropriately

Objectives:

By the end of this semester, students will

- 1- Develop strategies for understanding new word meanings by
 - 1.1 understanding word formation (root, suffixation, derivation, compounding etc.)
 - 1.2 Guessing difficult words from context
 - 1.3 recognizing the part of the speech of the unknown words
- 2- understand relations between parts of a text through
 - 2.1 lexical devices (repetition, antonym, synonym)
 - 2.2 referring expressions (he, she, former, later etc.)
- 3- Identify explicit salient features in a text
 - 3.1 identify the topic

- 3.2 identify the topic sentence or main idea
- 3.2 identify supporting sentences

4. Locate information and clarify meaning by

- 4.1 scanning the text
- 4.2 skimming the text
- 4.3 reading closely

5. To activate background knowledge with the help of illustrations, headings, graphs etc.

6. Be aware of the importance of recalling ideas and details after the reading a text.

Goal 2. To enable students to become fluent readers.

Objectives:

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

- 1- Carry out timed reading activities with a high level of comprehension

Course assessment

Mid-term 50%
Extensive reading 20%
Quiz 30 %

Extensive Reading:

For extensive reading, the students are required to read three texts (short stories, magazines or news articles) before each mid-term and prepare a report for each reading text. The students should also provide the original copy, photocopy or hardcopy (for internet sources) of each text. One of the reports, which the students prefer to be evaluated, will be graded by the teachers. The deadlines for the submission of the reports will be announced.

ANADOLU UNIVERSITY
SCHOOL OF FOREIGN LANGUAGES
2004-2005 FALL TERM
UPPER INTERMEDIATE LEVEL READING SYLLABUS

Week 1 27 Sep-01 Oct 04	Introduction to the course Mosaic Unit 1 (New Challenges)
Week 2 04-08 Oct 04	Mosaic Unit 1 continued Mosaic Unit 2 (Looking at Learning)
Week 3 11-15 Oct 04	Mosaic Unit 2 continued *Story
Week 4 18-22 Oct 04	Mosaic Unit 3 (Relationships) *Official Quiz 1
Week 5 25 - 29 Oct 04	Mosaic Unit 4 (Health and Leisure) 29th October National Holiday
Week 6 01-05 Nov 04	Unit 4 continued * Story <i>*Submission of extensive reading reports</i>
Week 7 08-12 Nov 04	Mosaic Unit 5 (High Tech, Low Tech) Official Quiz 2
Week 8 15-19 Nov 04	Unit 5 continued * Story (15-16 Nov 04 Religious Holiday)
Week 9 22-26 Nov 04	MIDTERM 1
Week 10 29 Nov-03 Dec 04	Mosaic Unit 6 (Money Matters)
Week 11 06-10 Dec 2004	Mosaic Unit 7 (Remarkable Individuals) * Story

Week 12 13-17 Dec 04	Mosaic Unit 7 continued
Week 13 20-24 Dec 04	Mosaic Unit 8 (Creativity) *Official Quiz 3
Week 14 27 - 31 Dec 04	Mosaic Unit 8 continued * Story
Week 15 03-07 Jan 05	Mosaic Unit 9 (Human Behaviour)
Week 16 10-14 Jan 05	Mosaic Unit 9 continued * Official Quiz 4
Week 17 17-21 Jan 05	Mosaic Unit 10
Week 28 24-28 Jan 05	MIDTERM 2

APPENDIX J

SAMPLE CLASSROOM ASSESSMENT TECHNIQUE FOR CONTENT COURSES

CLASSROOM ASSESSMENT T E C H N I Q U E

1

Background Knowledge Probe

Estimated Levels of Time and Energy Required for:

Faculty to prepare to use this CA T	MEDIUM
Students to respond to the assessment	LOW
Faculty to analyze the data collected	MEDIUM

DESCRIPTION

At the first class meeting, many college teachers ask students for general information on their level of preparation, often requesting that students list courses they have already taken in the relevant field. This CAT is designed to collect much more specific, and more useful, feedback on students' prior learning. Background Knowledge Probes are short, simple questionnaires prepared by instructors for use at the beginning of a course, at the start of a new unit or lesson, or prior to introducing an important new topic. A given Background Knowledge Probe may require students to write short answers, to circle the correct responses to multiple-choice questions, or both.

PURPOSE

Background Knowledge Probes are meant to help teachers determine the most effective starting point for a given lesson and the most appropriate level at which to begin instruction. By sampling the students' background knowledge before formal instruction on that topic begins, these probes also provide feedback on the range of preparation among students in a particular class.

For students, the Background Knowledge Probe' focuses attention on the most important material to be studied, providing both a preview of what is to come and a review of what they already know about that topic. Background Knowledge Probes can also be used as pre- and post-assessments: before instruction, to find out the students' "baseline" knowledge level; and immediately after, to get a rough sense of how much and how well they have learned the material. This CAT elicits more detailed information about what students know than Focused Listing (CAT 2) can.

RELATED TEACHING GOALS

Improve memory skills (TGI Goal 11)

Develop appropriate study skills, strategies, and habits (TGI Goal 16)

Learn terms and facts of this subject (TGI Goal 18)

Learn concepts and theories in this subject (TGI Goal 19)
Develop an informed historical perspective (TGI Goal 32)

SUGGESTIONS FOR USE

You can use this technique as early as the first class meeting; it works well in classes of any size. Focus the questions in your probe on specific information or concepts that students will need to know to succeed in subsequent assignments, rather than on their personal histories or general knowledge. Make sure to ask at least one question that you are certain most students will be able to answer correctly and at least one other that you judge to be more difficult. At the next class meeting, individual students can find out how the class as a whole did, and can gauge their level of preparation in relation to that of the group. To assess changes in students' knowledge and concision in responding, you can use the same or similar questions at the midpoint and at the end of the lesson, unit, or term. The probe can also be used to introduce important concepts that will subsequently be developed through a number of lessons, or throughout the entire course.

EXAMPLES

From a Survey of English Literature (English/Literature)

On the first day of class, to get an idea of how much exposure her students had had to Shakespeare's plays, this professor prepared a Background Knowledge Probe. The form asked students in her lower level English literature course to list the plays that they were familiar with. For each work listed, they were to check off whether they had read it, seen it performed in a theater, or seen it in the movies or on television.

Most of the lists she got back were predictably short; and *Romeo and Juliet*, *Hamlet*, and *Macbeth* were the titles most frequently named. A handful of students turned in quite long lists, however, while a few turned in blank forms. Several other students included works on their lists that were not by Shakespeare. More students had seen Shakespeare's works on television or in the movies than had read them, and only a quarter had seen a live performance. As a result, most of the students were familiar with abridged and sometimes drastically altered versions of the original plays.

At the next class meeting, the English literature professor shared a summary of this information with the class, letting some of them know that they would be encountering a play for the second time and explaining that she had substituted *King Lear* for *Macbeth* because many already had seen or read the latter. She complimented the students who had already read and/or seen a work of Shakespeare and asked them to assist those in class to whom it would be totally new. She also alerted the class to major differences between the texts they would read and some of the filmed versions they had seen. She then passed out a handout summarizing the feedback gathered and giving the names of the authors of the works listed that were not by Shakespeare.

From Fundamentals of Electric Circuits (Electrical Engineering)

Before their first lecture-demonstration-lab session, this electrical engineering instructor wanted to determine what his students might already have learned-whether through course work or on-the-job experience about measuring current, voltage, and resistance.

To find out, he prepared a Background Knowledge Probe that contained five illustrations representing the displays of the following instruments: voltmeter, ammeter, ohmmeter, deflection multimeter, and digital multimeter. Each illustration clearly indicated a different reading or readings through the pointer positions and switch settings, or digital readouts shown. Near the end of the first class session, he presented students with these illustrations, reproduced on two pages, and asked them to determine, and write out, the readings for the five instruments shown.

The responses to his probe indicated that most students were more familiar with digital instrument displays and that most of them had some idea what the readings on at least one of the instruments meant. But he also saw that most students did not use standard electrical engineering notation and vocabulary in their responses and that there was quite a range of prior knowledge. A few students had no idea how to respond; a few others got everything correct.

To capitalize on the diversity in preparation, he decided to start the next class with a small-group warm-up exercise. He randomly assigned students to groups of four and then handed out clean copies of the same Background Knowledge Probe. He gave the groups fifteen minutes to come up with correct readings for all five instruments. They were told that each person in each group was expected to learn the correct answers. This, of course, meant that the more experienced students had to explain and teach their responses to the novices.

After the instructor had asked questions of each group, he commented on the diversity of the earlier, individual responses to the probe. To respond to this diversity, he told the class, he had to include material that would be totally new to some of them but would be review to others. He asked the more advanced students to consolidate their knowledge by helping their less experienced classmates. And he asked the beginners to recognize their responsibility to invest relatively more time and effort.

STEP-BY-STEP PROCEDURE

1. Before introducing an important new concept, subject, or topic in the course syllabus, consider what the students may already know about it. Recognizing that their knowledge may be partial, fragmentary, simplistic, or even incorrect, try to find at least one point that most students are likely to know, and use that point to lead into other, less familiar points.
2. Prepare two or three open-ended questions, a handful of short-answer questions, or ten to twenty multiple-choice questions that will probe the students' existing knowledge of that concept, subject, or topic. These questions need to be carefully phrased, since a vocabulary that may not be familiar to the students can obscure your assessment of how well they know the facts or concepts.
3. Write your open-ended questions on the chalkboard, or hand out short questionnaires. Direct students to answer open-ended questions sufficiently, in two or three sentences if possible. Make a point of announcing that these Background Knowledge 'Probes are not tests or quizzes and will not be graded. Encourage students to give thoughtful answers that will help you make effective instructional decisions.
4. At the next class meeting, or as soon as possible, let students know the results, and

tell them how that information will affect what you do as the teacher and how it should affect what they do as learners.

After you have collected the responses, try dividing them into three or four piles, according to degree of preparation for the upcoming learning tasks. You can, for example, quickly rate both written answers and multiple-choice responses, classifying them into the following four categories: [-1] = erroneous background knowledge; [0] = no relevant background knowledge; [+ 1] = some relevant background knowledge; [+ 2] = significant background knowledge. By summing the individual numerical ratings for each question, you can find out whether the class as a whole has more knowledge about some topics than about others. For an even faster analysis, you can simply sort responses into "prepared" and "not prepared" piles.

IDEAS FOR ADAPTING AND EXTENDING THIS CHART

After students have responded individually to the probes, ask them to work in pairs or small groups to come up with mutually acceptable, correct answers.

Divide the class into small groups of students and ask them to rate and sort responses from other groups.

If you have a small number of students in an upper-level course, consider having the students interview each other, taking notes on the responses to probe questions.

Use Background Knowledge Probes as a higher-level follow-up or alternative to Focused Listing (CAT 2).

PROS

Background Knowledge Probes can provide useful data not only about students' knowledge of the topic but also about their skills in communicating what they know.

They provide baseline data that teachers can use to make critical instructional decisions before instruction begins.

By building on specific background knowledge that students do have, the instructor can give students a familiar starting point, a "hook to hang new information on."

Like Focused Listing, this technique can "prime the pump" of recall, encouraging students to connect the lesson or course topic to their own past experiences and prior knowledge and prodding students to begin constructing their own "bridges" between old and new knowledge.

CONS

If student responses are at odds with the teacher's expectations, the feedback can sometimes be overwhelming and even demoralizing to the instructor.

In a similar fashion, trying to respond to the probe can be a difficult and frustrating experience for students who are underprepared.

In the process of reading and classifying responses, a teacher may form hard-to-change first impressions, which can affect his or her expectations of the students for the remainder of the term.

CAVEATS

Feedback from this technique can throw even the best-planned lesson or syllabus into serious question by demonstrating the need for quick and sometimes major revisions in instructional plans. Therefore, Background Knowledge Probes should be used only if you have the time, energy, and willingness to analyze and respond to the information they generate.

Do not generalize too much from the responses to a single administration of this CAT.

Although you will naturally be concerned with the underprepared students that a Background Knowledge Probe is likely to identify, you will also need to plan a response for those students who are adequately to extremely well prepared.