AN INVESTIGATION INTO THE REQUIREMENTS OF DISCIPLINE TEACHERS

FOR ACADEMIC ENGLISH LANGUAGE USE

IN A TURKISH MEDIUM UNIVERSITY

A THESIS PRESENTED BY

SONER ARIK

TO THE INSTITUTE OF ECONOMICS AND SOCIAL SCIENCES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF ARTS

IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

BİLKENT UNIVERSITY

JULY 2002

ABSTRACT

Title:	An Investigation into the Requirements of Discipline Teachers for Academic English Language Use in a Turkish Medium University
Author:	Soner Arık
Thesis Chairperson:	Dr. William E. Snyder Bilkent University, MA TEFL Program
Committee Members:	Julie Mathews Aydınlı Bilkent University, MA TEFL Program
	Dr. Muhsin Karaş Abant İzzet Baysal University

This study investigated the English language use requirements of content course teachers at Niğde University (NU). Niğde University is a Turkish medium university, at which English is taught as an integrated skills service course for matriculated students. Students at NU take an exemption test at the beginning of their first year at university, and have to enrol in a language course in their first year of education if they fail the exam. This study aims at finding out what the teachers in the content courses of different disciplines actually require in terms of academic English, in hopes of being able to make well-based curricular recommendations for English language courses at NU. The needs analysis in this study attempted to find answers to these research questions:

1.   What are the academic English language use requirements of content course teachers for their students at Niğde University (NU), which is a Turkish medium university?

2.   According to the English language use requirements of content course teachers, which English language skills have the most priority for the students studying at NU?

3.   Are there different English language use demands of the content course teachers from their students at NU in terms of:

a.   Different schools, i.e. faculties or vocational schools.

b.   Whether teachers have Ph.D.s or M.A.s.

c.   Different sciences, i.e. hard-pure (HP), soft-pure (SP), hard-applied (HA), or soft-applied (SA).

If so, what are they?

Data were collected from the content course teachers at NU. In order to collect data for this needs analysis, a questionnaire was prepared, and delivered to the 320 content course teachers at NU. The 177 completed questionnaires were then analysed using descriptive statistics, ANOVAs, t-tests, Scheffe tests, and one-way chi-square tests.

In this thesis, the main results of the needs analysis can be summarised as showing that the teachers find English fairly important for their students. Nevertheless, only a small number of teachers reported that they ever required specific academic English skills from their students. Among the responses of those teachers who did report requiring some English usage, 'reading' was shown to be the required skill given most priority. When the data were analysed in accordance with science classification, needs for reading, speaking, and listening skills were realised. With respect to science, school, and educational background (teachers with/without Ph.D.s), teachers at faculties, teachers from the HP sciences, and teachers with Ph.D.s were shown to require more academic English use than their colleagues.

BILKENT UNIVERSITY

INSTITUTE OF ECONOMICS AND SOCIAL SCIENCES MA THESIS

EXAMINATION RESULT FORM

July 10, 2002

The examining committee appointed by the for the Institute of Economics and Social

Sciences for the thesis examination of the MA TEFL student

Soner Arık

has read the thesis of the student.

The committee has decided that the thesis of the student is satisfactory.

Thesis Title : An Investigation of the Requirement of Discipline Teachers
for Academic English Language Use in A Turkish Medium
University.

Thesis Advisor : Julie Mathews Aydınlı
Bilkent University, MA TEFL Program

Committee Members : Dr. Bill SNYDER
Bilkent University, MA TEFL Program

Dr. Muhsin Karaş
Abant İzzet Baysal University

We certify that we have read this thesis and that in our combined opinion it is fully

adequate, in scope and quality, as a thesis for the degree of Master of Arts.

_____
Dr. William E. Snyder
(Chair)

_____
Julie Mathews Aydınlı
(Committee Member)

_____
Dr. Muhsin Karaş
(Committee Member)

Approved for the

Institute of Economics and Social Sciences

_____

Kürşat Aydoğan

Director

Institute of Economics and Social Sciences

Acknowledgments

First of all, I would like to thank my advisor, Julie Mathews Aydınlı for her invaluable guidance, support and patience throughout my study. I would also like to thank my instructors Dr. Sarah Klinghammer and Dr. William E. Snyder for their continuous help and support throughout the year.

Special thanks to my colleagues Neslihan Pekel, Emel Şentuna, Petek Subaşı, Ayşegül Sallı, and Özlem Gümüş who gave me very helpful assistance and support.

I also would like to express my sincere thanks to all my classmates in the MA TEFL 2002 Program for supporting me and preventing me from getting lost on my depressed days throughout the year.

TO MY LOVING NEPHEW

ALPEREN

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

English for Specific Purposes (ESP), along with its sub-category of English for Academic Purposes (EAP), has been considered as being "perhaps the most vibrant and innovative area of language teaching" (Hayland, 2000, p.297). As the names ESP and EAP imply, a focus is being given to the purposes of language programs. This focus requires a specification, or determination, of needs, which Smith has defined as "the gap between the current performance and desired results". In order to design effective language courses, these needs should be examined from different points of view, such as the students', the administrators', or the teachers'.

This study aimed at finding out the language use needs of students by investigating content course teachers' language use requirements. The content course teachers were considered as being the 'clients' who are influenced by language programs (Bachman & Strick, 1978), and their language use requirements for the students were considered as referring to the students' language needs. That is, the language requirements of the teachers were considered as being the language needs of the students.

The investigation was carried out at Niğde University (NU), which is a Turkish medium university. The participants of the study were the content teachers from each department at the university. The study is considered to be a basis for making recommendations about the English language courses at NU. The needs analysis in this study focused on content course teachers' requirements, and it was thought to be the first step in defining the differences and similarities between the requirements of teachers of different disciplines, sciences, and educational backgrounds. It was also thought to be a basis in determining whether the English

language courses at NU should be addressed to particular disciplines and sciences or to general academic language skills for everyone. The purpose of the study was to identify the English language use requirements of content teachers from the following perspectives:

1. In different types of sciences such as: hard-pure sciences, soft-pure sciences, hard-applied sciences, and soft-applied sciences.

2. In different types of schools such as: vocational schools and faculties.

3. In terms of the teachers being novice or experienced.

4. In terms of teachers' having or not having M.A.s and Ph.D.s.

Background of the Study

Standardisation of language proficiency, and specification of language demands, or needs of learners (Stern, 1992), and a great emphasis on special purposes for language learning in second language programs has resulted in a raised awareness of the language needs of students (Schutz and Derwing, 1981). As Wilkins asserted, investigation of students' language needs is essential in determining the most satisfactory and useful goals/objectives for language learners (cited in Schutz & Derwing, 1981); and is also required for successful and effective language course designs (Mackay, 1978 & Valdez, 1999).

Language needs can be examined from different views and specified by different researchers. Obviously it is not easy to do a needs analysis considering that there are many kinds of data to be gathered from different participants of a language course. Jordan (1997) has also realised this difficulty, and prepared a diagram, modified in Figure 1, showing what sort of needs to obtain from which participants of a language course program.

STUDENT	COURSE DESIGNER AND TEACHER	EMPLOYER/ SPONSOR	TARGET SITUATION
Needs: present, current, subjective, felt, learning. Wants/likes Lacks Deficiency analysis	Purposes Perceived-needs Learning-centred	Demands Product-oriented	(Subject/department) Needs: target, future, objective. Target-centred Necessities Aims

Figure 1: Modified Version of Jordan's Diagram for Needs Analysis (Jordan, 1997)

As can be understood from Jordan's diagram, each kind of needs can be determined by appealing to different participants of a program. As indicated in the title, the purpose of this study is to investigate the students' academic English language needs in responding to the demands of their discipline teachers. The study focuses on target language needs, which Hutchinson and Waters (1987) define as "….what the learner needs to do in the target situation" (p.54). It does this by considering the language necessities and lacks through the discipline teachers' points of view. The study is based on the questions that Hutchinson and Waters ask to gather data in order to determine the learners' target language needs. The researcher adapted those questions as:

1. Why do the learners need the language?

2. What are the content areas in which the learners have to use academic English to respond to their discipline teachers' English language use demands?

3. How are the learners using the language in regard to the academic subjects they are studying?

The answers to these questions help English language teachers learn the students' objective needs, which Hutchinson and Waters also define as 'necessities', for which the students will learn and practice academic English. They also make it

possible for the language teachers to learn the students' "lacks" in language skills and common linguistic features like structures, vocabulary. The lacks, which Hutchinson and Waters define as "the gap between the target proficiency and what the learner knows already" (p.56), let the language teachers in an EAP course determine the gap between what the students have to know about language in terms of academic English use in the content courses and to what extent the students have the needed knowledge. In this study, since the focus is on the academic English language use demands of the discipline teachers from their students, what the teachers require from their students in terms of academic English language use in the content courses is the criterion in determining the 'necessities' and 'lacks'. Therefore, the content course teachers are considered to be the ones who decide the 'necessities' and 'lacks'.

<div align="center">Statement of the Problem</div>

At universities in Turkey, foreign language learning receives a great deal of attention. Every university in Turkey has English language courses. Both preparatory and matriculated courses generally follow one of two designs: integrated skills courses, or preparatory classes designed to teach each skill separately.

Niğde University has not yet established preparatory courses, and still teaches English language as an integrated skills service course for matriculated students. At Niğde University, students are required to take an exemption test before beginning their first year at university. If they cannot pass the exam, they have to enrol in a language course in their first year of education. During this first year, which is a 28-week period, students attend two-hour long English courses weekly in the first term, lasting 14 weeks, and three hours weekly in the second term, lasting 14 weeks. This

leads to a sum of 70 hours in the academic year. The courses at Niǧde University are required to include all skills during this period of instruction, which means teachers are expected to teach their students reading, writing, listening, and speaking, in just 70 hours. Such a broad spectrum of skill objectives makes it hard to deal with all of the students' language needs in a manner fitting with those explained in the previous section of this chapter.

The English Language teachers at Niǧde University are supposed to teach classes which are made up of students from the same discipline. However, for the teachers to plan and implement a successful curriculum, or syllabus, for each department is almost impossible as the English language teachers change departments each year, and teach to more than one department at the same time. This fact creates a difficult situation for the teachers, in that they have to deal concurrently with the needs of students from various departments in a very limited time span. Besides this, since they may not have the opportunity to teach to the same departments the next academic year, they experience the same problems each academic year. Therefore, very general needs that are more or less valid and relevant for all students from different disciplines are determined. However, because different disciplines, or departments, may require different language needs, it is important to discover some specific needs, on which to base the limited instruction time, thereby maximising student learning and easing teacher frustration.

The focus of this needs analysis was based on the language use demands that the discipline teachers have for their students. The reasons to focus on such demands are that, unlike those of students or administrations, they are the language needs that are most likely to remain stable in later years. Besides, these demands are based on

the experiences and views of those discipline teachers, who can best guide the English language teachers on what students should cover in the target language in order to be successful in their disciplines.

Significance of the Problem

An investigation of the language use demands of the discipline teachers will enable the teachers of English to learn which skills they need to focus on for students in different disciplines, or at least groups of disciplines. In turn, the students studying in different disciplines can be prepared in a way that they can better respond to the language use demands of their discipline teachers. The teachers of English may also become aware of the fact that each discipline has to some extent both similar and different language use requirements. This study will function as an example for determining the language use demands in different types of schools, different sciences, and different departments. Another use of this study will be also to determine goals and objectives to establish a curriculum that is useful and relevant for each department, thereby making it easier for the teachers of English to teach to different departments at Niğde University from year to year.

Research Questions

The purpose of this study is to do a needs analysis to learn the academic language needs of the students at Niğde University. The needs analysis will be done investigating the requirements of content course teachers from the students in terms of English language use in the students' current studies related to the content courses. The study aims at finding out whether any of the language skills are given priority over the others, and whether there are significant differences between the requirements of content teachers across different sciences such as hard-pure, hard-

applied, soft-pure, or soft-applied, across different types of schools such as faculties

or vocational schools, across teachers' educational backgrounds such as teachers

with or without MA, and teachers with or without Ph.D., and across teachers'

teaching experiences both in general and at NU. That is to say, the study is intended

to answer the following research questions:

1. What are the academic English language use requirements of content course teachers from their students at NU, which is a Turkish medium university?

2. According to the English language use requirements of content course teachers, what English language skills have the most priority for the students studying at NU?

3. Are there different English language use demands of the content course teachers from their students at NU in terms of:

   a. Different schools, e.g. faculties or vocational schools.

   b. Whether teachers have Ph.D.s or M.A.s.

   c. Different sciences, e.g. hard-pure (HP), soft-pure (SP), hard-applied (HA), or soft-applied (SA).

If so, what are they?

CHAPTER 2: LITERATURE REVIEW

Introduction

This study aims at investigating the requirements of content course teachers in terms of academic English language use. One of the reasons for such an investigation is that, among the studies on needs analysis, language needs are mostly investigated through the students' or English language teachers' points of views. In addition, most of the surveys on needs analysis are conducted in English as Second Language (ESL) environments and non-Turkish medium institutions, which is in contrast with the situation at Niğde University (NU).

In this chapter, the researcher tries to set up a framework for a clearer understanding of the relationship between academic English, needs analysis, and language course design. The first step in this chapter is to discuss the emergence of the term English for Specific Purposes (ESP) and the relation between ESP and English for Academic Purposes (EAP). After that, the role of the needs analysis in curriculum/syllabus design is explained in general terms. To clarify the relationship further, various definitions and types of needs are also given under a third sub-heading in this section. Finally, the researcher tries to point out the relationship between language needs and the content course teachers' language use demands from their students. In this section the researcher shows which types of language needs fit the language use requirements of content course teachers, and on the basis of this determines which type of data to collect and from whom to collect that data.

ESP / EAP

A great necessity for defining language objectives in accordance with war needs occurred during World War II. This situation resulted in the specification of

language objectives, which until that time had been very broad. The recognition that language objectives were overly broad led gradually to a standardisation of language proficiency, in other words a defining of different language proficiency levels, and a specification of skills by taking into consideration the demands, or needs of learners, into consideration (Stern, 1992).

In addition to this standardisation, second language programs, after World War II, began placing greater emphasis on particular purposes for language learning, particularly in the specialised areas of science and technology. These specialised areas of science and technology became the focus of a new type of second language program, namely English for Specific Purposes (ESP), which Carter (1983) identifies in three types:

1. English as a restricted language

2. English for Academic and Occupational Purposes

3. English for specific purposes. (p.132)

More recently, Bell (1998) defined EAP as a more detailed branch of ESP and specifically focused on academic study. Similarly, Swales (1990) and Short (2000) have asserted that EAP courses have a purpose of both helping people to develop their academic communicative competence and providing knowledge of academic English for the students to succeed in their subject areas.

The growing emphasis on special purposes for language learning and the growth of EAP corresponded with an increasing awareness of students' language needs (Schutz and Derwing, 1981). By looking at the language needs of the students, it was possible to find out which language skills were most needed for tasks, and from that to determine the most satisfactory and useful goals/objectives for language

learners (Wilkins, cited in Schutz & Derwing, 1981). As Johns (1991) asserted, defining the target English situations and using it as the basis of EAP/ESP would make it possible to provide the students with the specific knowledge they need to succeed in their content courses or content based studies.

<div align="center">Needs Analysis in Curriculum/Syllabus Design</div>

A growing appreciation of the significance of needs in ESP and EAP courses helped lead to the practice of conducting 'needs analyses', a term used interchangeably with 'needs assessment' in this study, and referring basically to the determining of language learning needs in order to improve curriculum/syllabus designs. That is, a needs analysis provides knowledge about the purpose of a language course around which an effective curriculum with appropriate teaching/learning methods can be designed.

By examining the aims, procedures, and applications of needs assessment, Brown (1995) insists on the necessity of a needs analysis and considers needs to be "…an integral part of systematic curriculum building" (p.35). He also points out the necessity of defining needs specifically due to their importance in curriculum design. Sysoyev (2000) defined 'needs analyses' as having the purpose of bringing together the required and desired needs, and of determining goals and objectives to conceptualise the content of the course. Mackay (1978) also points out the necessity of needs assessment "…in order to design and teach effective courses", and adds that, "the teacher and the planner must investigate the uses to which the language will be put".

Jordan (1997) claims that a needs analysis is the starting point around which the syllabi, courses, materials, and the teaching and learning techniques are

determined. He claims that a needs analysis could be done around six topics, namely "target-situation analysis, present-situation analysis, deficiency analysis, strategy analysis, means analysis, language audit and constraints" (p.22). The data involved in these topics of analysis, in Jordan's words, are "necessities, demands, wants, likes, lacks, deficiencies, goals, aims, purposes and objectives" (p.22).

Masuhara's (1998) model of course design procedures, given in Figure 2, verifies the important role of a needs analysis in designing a course. He makes a summary of expert recommendations on 'the sequence of course design', and determines 'needs analysis' as the starting stage of course design.

Needs Analysis
↓
Goals and objectives
↓
Syllabus Design
↓
Methodology/Materials
↓
Testing and evaluation
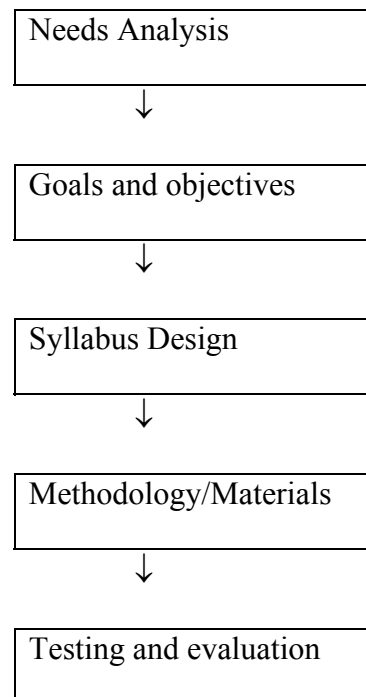
Figure 2: Masuhara's Model of Course Design Procedures (p. 247)

Valdez claims that, "…to ensure the success of English as a Second Language, teachers need to determine what each learner needs and wants to learn. This is done through needs analysis before, during, and after the course. The results of the assessment will result in the design of the syllabus" (Valdez, 1999).

Richards (1990) discussed the relation between needs analyses and language learning, and justified the significance of a needs analysis by focusing on its purposes. According to Richards, a needs analysis has three purposes, which are:

1. Providing a mechanism for obtaining a wider range of input into the content, design, and implementation of a language program through involving such people as learners, teachers, administrators, and employers in the planing process.

2. Identifying general or specific language needs that can be addressed in developing goals, objectives, and content for a language program.

3. Providing data that can serve as the basis for reviewing and evaluating an existing program. (p. 1)

Like Richards, Graves (2000) also focuses on the purpose of needs analyses. She simply claims that the basic goal of a needs analysis is to define the purpose of a language course, so that it becomes possible to determine what will be taught, how it will be taught, and how it will be evaluated in the course.

Smith (1989) and Kaufman (1995) explain the relation between a needs assessment and a language course by defining needs as gaps between the current situation and the goals of the course. They claim that needs assessment is a process of determining the needs to close the gaps, and provides an opportunity to decide the most appropriate planning for a course design. Similarly, the Consortium Teacher Training Task Force in Thailand (CTTTF, 1985) also emphasises the relation between a needs assessment and course design considering needs assessment as a survey with a purpose of basically finding out the gaps between what is present and what is needed, and planning a strategy for closing the gaps to meet the goals of a

course. Although the needs analyses may let the language teachers plan a strategy, it should not be thought of as an activity having a basic focus of determining appropriate methods to close the gaps mentioned above. It, in fact, focuses on the results, or ends, in other words, the goals for a course design that will be competitive and beneficial in the long run (Kaufman, 1995).

<div align="center">Definitions / Types of Needs</div>

Brown (1995), Richterich and Chancerel (1980), and Berwick (1989) have made various specifications of needs through different viewpoints and definitions. Berwick (1989) has defined needs as "felt" and "perceived" needs. Felt needs are the ones that the learner thinks that he needs. They are a matter of feelings, thought, and assumptions. Since they are not based on experiences, there is no evidence supporting their validity or truth. Therefore, they can also be defined as 'wants' or 'desires' of the learner. 'Wants' and 'desires' closely fit with Richterich and Chancerel's (1980) division of subjective needs, to which they also add 'expectations' as a third type of subjective needs (cited in Brindley, 1989).

Perceived needs come out of the experiences or assumptions of the learners, graduates of that discipline, or, most often the teachers of that discipline, and they refer to the needs that the teachers think that the learners need. Perceived needs can be considered as being both subjective needs since they are also based on assumptions, wants, desires and expectations, and objective needs as they are based on also the experiences. Objective needs are the ones that can be "…determined on the basis of clear-cut, observable data gathered about the situation, the learners, the language that students must eventually acquire" (p. 31). They closely refer to the teachers' language requirements, which are to be investigated in the current study,

more than do the subjective needs, which are difficult to determine because of being based on assumptions, wants, desires and expectations (Brindley, 1984).

As with these definitions by Berwick (1989) and Richterich & Chancerel (1980), Brown (1995) has added further specification to the definition of needs by including 'situation needs' which are defined as physical, social, and psychological needs of the learners.

Considering the fact that the focus of this research is on academic language requirements, educational needs (Van Ek, 1983; Kharma, 1998) are also directly relevant to this study. Educational needs consist of 'general educational needs' dealing with cultural and intellectual development of the learners, and 'specific linguistic needs' including the knowledge and the skills of the language. To be more specific, Van Ek (1983) has summarised these two types of educational needs altogether in relation with language functions as the following:

a. A general characterisation of the type of language contacts, as a member of a certain target group, the student will engage in.

b. The language-activities in which the student will engage.

c. The setting in which the student will use the foreign language.

d. The roles (social and psychological) the student will play.

e. The topics the student will deal with.

f. What the student will be expected to do with regard to each topic. (p.7)

Another definition for determining the needs of language learners has been made by Hutchinson and Waters (1994) in terms of 'target' needs and 'learning' needs. Target needs are further divided into three parts as "necessities" referring to what learners need to know so as to function relevantly in a specific situation,

"lacks" referring to what the learners have learned about language up to that time in order to reach target needs; and "wants" referring to the learners' views of what they think that they need to learn to meet the target needs. 'Learning' needs are stated as the needs referring to what the learners have to learn so as to reach the target needs. In this study, the focus is on the target language needs to close the gap between the necessities and the lacks of the students. Necessities, which are considered to help students function relevantly in their content courses, are to be investigated to find out the target needs.

<p style="text-align:center;">Language needs to language use demands</p>

Pratt (1980) states that the needs assessment is not only finding out the needs of language learners but also determining which of those needs have the most priority. This is what Richards (1990) also claims by defining needs analysis not only as a term including the determination of the language needs of language learners, but also categorising those needs in accordance with their priorities.

Since the focus of the study is the target language needs, the study will mostly answer the following questions categorised by Hutchinson & Waters (1994) under the title of "a target situation analysis framework". The questionnaire prepared for this study is also organised around this framework:

A Target Situation Analysis Framework
1.   Why is the language needed?
-      for study;
-      for work;
-      for training;
-      for a combination of these;
-      for some other purpose, e.g. status, examination, promotion.
2.   How will the language be used?
-      medium: speaking, writing, reading, etc.;
-      channel: e.g. telephone, face to face;
-      types of text or discourse: e.g. academic texts, lectures, informal conversations, technical manuals, catalogues.

3.   What will the content areas be?
-      subjects: e.g. medicine, biology, architecture, shipping, commerce, engineering;
-      level: e.g. technician, craftsman, postgraduate, secondary school.
4.   Who will the learner use the language with?
-      native speakers or non-native
-      level of knowledge of receiver: e.g. expert, layman, student;
-      relationship: e.g. colleague, teacher, customer, superior, subordinate.
5.   Where will the language be used?
-      physical setting: e.g. office, lecture theatre, hotel, workshop, library;
-      human context: e.g. alone, meetings, demonstrations, on telephone;
-      linguistic context: e.g. in own country, abroad.
6.   When will the language be used?
-      concurrently with the ESP course or subsequently;
-      frequently, seldom, in small amounts, in large chunks. (p.59)

The answers to the questions above help English language teachers learn the students' objective needs, which Hutchinson and Waters (1994) also call as 'necessities', and which include information about academic situations like lectures, seminars, projects, etc. in which the students will use academic English. They also make it possible for the EAP teachers to learn the language skills and common linguistic features, e.g. structures, vocabulary that are mostly used in those academic situations. 'Lacks', which Hutchinson and Waters (1994) define as "the gap between the target proficiency and what the learner knows already" (p.56), help the language teachers, in an EAP course, determine the gap between what the students have to know about language in terms of academic English use in the content courses and to what extent the students have the necessary knowledge. In addition to these needs, also 'Future Professional Needs', as perceived by discipline teachers, can help EAP teachers become more aware of objective perceived needs and, thus, design more affective and useful EAP courses. Despite the effectiveness and usefulness of future professional needs in planning language courses, they are not to be investigated in

this study since the focus of the study is not on the students' language use needs for their further studies but on their current language requirements.

Richterich (cited in Jordan, 1997) claims that, while determining, or even categorising needs, we have to give answers to seven main questions, four of which are stated as what is the purpose of the analysis, whose needs should be analysed; who is to decide what the language needs are; and what is going to be analysed. Answering such questions forces the researcher to define what sort of data is needed, and from whom that data should be collected. The necessity of focusing both on the sort of needs and the participants of a needs analysis lies in the diagram of Masuhara (1998). Figure 3 is Masuhara's diagram summarising the concept of needs in literature:

OWNERSHIP	KIND	SOURCE
LEARNERS' NEEDS	Personal Needs	Age, sex, cultural background, interests, educational background
	Learning Needs	Learning styles, previous language learning experiences, gap between the target level and the present level in terms of knowledge (e.g. target language and its culture), gap between the target level and the present level of proficiency in various competence areas (e.g. skills, strategies), learning goals and expectations for a course
	Future Professional Needs	Requirements for the future undertakings in terms of: Knowledge of language Knowledge of language use L2 competence
TEACHERS' NEEDS	Personal Needs	Age, sex, cultural background, interests, educational background, teacher's language proficiency
	Professional Needs	Preferred teaching styles, teacher training experience, teaching experience
ADMINISTRATORS' NEEDS	Institutional Needs	Sociopolitical needs, market forces, educational policy, constraints (e.g. time, budget, resources)

Figure 3: Masuhara's Diagram Listing the Needs Identified in Needs Analysis Literature (p.240)

Masuhara's diagram clearly shows us that each party of a language program may have different sorts of needs, which suggests that one should specifically identify what sort of needs are being dealt with rather than begin with a general specification of whom to collect the data from.

In the case of this study, the researcher is looking at goals and expectations for English courses at NU, and the requirements of the students in terms of language knowledge and use from the content course teachers' point of views. Bachman and Strick (1978) defined the content course teachers as 'clients' of a language program,

because language programs also affect the content course teachers. Considering that the requirements of teachers from the students are what the students need to be able to fulfill, the language requirements of the teachers are considered as being the language needs of the students. Since the focus is on the academic English language use demands of the discipline teachers from their students, what the teachers require from their students in terms of academic English language use in the content courses is the criterion in determining the 'necessities' and 'lacks'. That is, the content-course teachers are considered to be the ones who decide the 'necessities' and 'lacks'.

The reason for choosing those teachers to collect the data from also relates to the conclusion reached by Horowitz (1986) in his study conducted at Western Illinois University. Horowitz concluded that there were many language requirements for the students, however, they could be learned and categorised easily "by getting the right information from the right people" (p.460). The choice of right people and right information depends on the type of the school and the English language program one is dealing with. That is what Cohen, Kirschner, and Wexler (2001) support by claiming that if the focus is on students from a non-English-medium university in which the students are to comprehend academic readings in English, then the focus and the goal of an English course should be to help the students gain the skills and strategies they need to meet these specific requirements in English. Consequently, since the focus of this research is on a Turkish-medium University and the students' current specific language use requirements in English are unclear, the right people to get the information from in this study are the content teachers.

As a conclusion, considering the purpose of this study as explained above in this section, the needs that are to be defined in this study are the objective needs referring directly to the current target language needs in terms of content course requirements, such as assignments.

Similar Studies

The study is in essence an analysis of the academic English language needs of students from the discipline teachers' points of views. In the literature there are numerous studies looking at students' academic language needs, but they are mostly conducted through the students' or language teachers' points of views, or they look at language needs specifically in terms of 'writing' requirements.

Horowitz (1986), Canseco and Byrd (1989), Casanave and Hubbard (1992), and Jenkins, Jordan and Weiland (1993) are among those who have conducted studies investigating students' academic writing requirements by looking at the writing requirements of content course teachers from different departments.

Horowitz (1986) investigated the actual writing requirements in content courses. The study was conducted in an English as a second language (ESL) situation, and faculty members were examined. As a result of the study, it was revealed that the writing assignments at Western Illinois University could be divided into a small number of categories, a majority of which was related to content-based subjects. Horowitz argues that a good way to deal with those requirements would be to generalise them in accordance with departments, which could provide suggestions to writing teachers about what to focus on in writing courses to meet those needs. His argument seems acceptable. However, an alternative solution would be also to do generalisations according to science classification.

Canseco and Byrd (1989) also dealt with writing assignments assigned to students in an ESL environment. The study was conducted at the College of Business Administration at Georgia State University. By examining the content course syllabi, the researchers collected data on the writing requirements in content courses, in order to see whether appropriate preparation was being provided in the ESL courses. The findings revealed that many types of writing tasks, which ranged from examinations as the most required, and papers and reports as the least, were demanded of the students. In consideration of the data, it was suggested to establish General English courses rather than ESP courses.

Similar to the studies mentioned above, Casanave and Hubbard (1992), and Jenkins et al. (1993) also investigated writing requirements in ESL environments. Casanave and Hubbard conducted their study at Stanford University, where they surveyed content course teachers from Humanities and Social Sciences, and Science and Technology Programs. They found out that 'global features' of writing such as quality of contents and development of ideas were more important to the content course teachers than 'local features' that are on the surface level. Interestingly, in contrast with Canseco and Byrd's suggestion, Casanave and Hubbard concluded that an ESP course would better cover the writing needs of non-native students (NNS) at Stanford University.

Jenkins et al. conducted a study across six US universities to find out writing needs both in and beyond graduate programs, which may refer to the present and future professional language needs of the students. They investigated the writing requirements of engineering teachers in particular, and found that a high standard of

writing was required from the students regardless of whether they were native speakers (NS) or non-native speakers (NNS).

Apart from the studies mentioned above, which focused on writing requirements, there have also been a few studies aiming at finding out the language needs with a particular focus on language skills. Johns (1981) conducted a study at San Diego University in an ESL environment. She gave a questionnaire to the content course teachers, to investigate academic language skill needs and to find out which skills they considered essential. When the data were analysed and compared across different disciplines, it was revealed that reading was considered the most important skill. The order of the language skills in accordance with priority was, respectively, reading, listening, writing, and speaking. In conclusion, Johns proposes different implications according to disciplines. When the content courses in terms of Math and Engineering departments were taken into consideration, she recommended that English for Specific Purposes (ESP) courses should be established. On the other hand, when the departments except Math and Engineering were considered, it was suggested to establish General English language programs for students.

Chia, Olive, Johnson, and Chia (1998) found similar results to Johns'. Chia et al. conducted a study at Chung Shan Medical College in Taiwan, the purpose of which was to investigate the medical college students' and faculty members' perceptions on the importance of English language use in the students' content-based studies in an English as a Foreign Language (EFL) environment. Similar to this study, the former also focused on content course teachers' perceptions, though the Taiwan study was also able to take into consideration the perceptions of the students. The participants were 349 medical students and the faculty members at Chung Shan

Medical College. The goal of the investigation was to increase teaching and learning effectiveness. When the data were analysed, it was seen that, as with the John's study above, reading was the skill given highest priority while speaking was given the least.

Reading has not always proven to be the skill given most priority however. Chan (2001) carried out a research to determine the students' academic English language needs at Hong Kong Polytechnic University in an EFL environment. In this case, the participants were the students and the English language teachers at that university. Despite this obvious difference, the Chan study nevertheless shared the common objective with this study of trying to find out what skills had the most priority in terms of academic studies. One finding of the earlier study was that there was a priority sequence across language skills in English language courses, and it was as in the following order, from highest priority to lowest:

1. Improving listening and speaking skills for conferences and seminars.

2. Building vocabulary especially within the students' academic disciplines.

3. Building confidence.

4. Raising students' motivation in language learning. (Chan, 2001)

Conclusion

As can be understood from the studies mentioned above, no one has done a study investigating the same needs the researcher is examining with the current study. When compared with the current study, the studies mentioned above seem to provide a good sample since, similar to this study, they all, except for Chan's study, investigate the language needs through content course teachers' points of views. However, not all of them reflect the same purposes with the current study when the

needs investigated are examined specifically. That is to say, some of the studies investigate only the writing needs rather than examining the language needs in terms of the four skills. In addition, they mostly investigate the language needs required from students in an ESL environment, which is totally different from the situation existing in the current study. Moreover, none of them provided information about language needs particularly in Turkish medium universities, which is the main purpose of the current study. These are the reasons for the researcher to conduct the current study, which investigates the English language use needs of EFL students through the content course teachers' points of views in a Turkish medium university.

CHAPTER 3: METHODOLOGY

Introduction

The aim of this study was to investigate the English language use demands of content course teachers from their students at Niğde University (NU) through a needs analysis. NU is a Turkish medium university and students have to take English courses in the first year of their university instruction. The study was considered as an initial step to making curricular recommendations for the English language courses at NU. The needs analysis done in this study attempted to find answers to these research questions:

1.   What are the academic English language use requirements of content course teachers from their students at NU, which is a Turkish medium university?

2.   According to the English language use requirements of content course teachers, what English language skills have the most priority for the students studying at NU?

3.   Are there different English language use demands of the content course teachers from their students at NU in terms of:

a.   Different schools, e.g. faculties or vocational schools.

b.   Whether teachers have Ph.D.s and M.A.s.

c.   Different sciences, e.g. hard-pure (HP), soft-pure (SP), hard-applied (HA), or soft-applied (SA).

If so, what are they?

There are fifteen schools at NU; seven faculties and eight vocational schools. In these schools, there are 20,260 students; 6983 students at faculties and 13,277 students in the vocational schools. The main differences between faculties and

vocational schools are that faculties offer a four-year education while the education period in vocational schools is two years. In addition, faculties are considered to provide under-graduate level university education while the vocational schools are classified as "post-secondary" level. In terms of the selection of lecturers, there is not a legally determined difference between the two types of schools. However, since the faculties have a higher graduate level than that of the vocational schools, the educational levels of the lecturers, whether they have M.A.s or Ph.D.s, are taken into consideration more seriously for faculties than is done for vocational schools. That is, a majority of the lecturers with M.A.s and Ph.D.s work in the faculties at NU. Another difference between the faculties and vocational schools is that, due to their graduate levels, the students' OSYM score requirement is higher for faculties than it is for vocational schools. Related to this fact and the difference between the two types of schools' educational levels, the faculties' course-based requirements from the students can be considered to be more demanding than are those of vocational schools.

Participants

The participants of this study were the content course teachers at NU. There are 320 content course teachers at NU, all of whom received a questionnaire. One hundred seventy-seven teachers (55%) out of 320 teachers completed and returned the questionnaire. Those who completed the questionnaire represented eleven different schools of NU as seen in Table 1 below.

Table 1

Participants of the study according to school

	f	%
Zübeyde Hanım Sağlık MYO	6	3.4
Ulukışla MYO	11	6.2
Niğde MYO	10	5.6
BESYO	15	8.5
Ortaköy MYO	9	5.1
Aksaray MYO	19	10.7
Bor MYO	5	2.8
The Faculty of Education	14	7.9
The Faculty of Economics and Business Administration	20	11.3
The Faculty of Science and Literature	24	13.6
The Faculty of Engineering	44	24.9
Total	177	100.0

Note. MYO = Meslek Yüksek Okulu (Vocational School)
f = frequency (number of participants)

There were 177 teachers who participated in the study. In table 2, the participants are grouped according to the type of schools they work for.

Table 2

Classification of participants according to the types of schools in which they teach

	F	%
Faculty	102	57.6
MYO	75	42.4
Total	177	100.0

Note. MYO = Meslek Yüksek Okulu (Vocational School)
f = frequency (number of participants)

The participants of this study were also grouped in terms of the science classification of the disciplines they teach for. The classification of the sciences used in this study is based on Russell's (1991) model of 'Knowledge and Culture, by Disciplinary Grouping', which groups disciplines in terms of their natures of knowledge and disciplinary cultures. The modified table is presented in table 3.

Table 3

Science Classification in terms of Russell's Disciplinary Grouping

Disciplinary Grouping (Science Classification)	Nature of Knowledge
Humanities (soft-pure sciences)	• Reiterative • Holistic, riverlike • Concerned with particulars, qualities, and complication • Resulting in understanding and interpretation
Applied social sciences (Soft applied sciences)	• Functional • Utilitarian; know how via soft knowledge • Concerned with enhancement of [semi]-professional practice • Resulting in protocols and procedures
Pure sciences (hard-pure sciences)	• Cumulative • Atomistic, treelike • Concerned with universals, quantities, and simplification • Resulting in discovery and explanation
Technologies (hard-applied sciences)	• Purposive • Pragmatic; know how via hard knowledge • Concerned with mastery of physical environment • Resulting in products and techniques

The various schools/disciplines at NU were first categorised according to this framework, the full results of which are shown in Appendix A. The numbers and percentages of the teachers, who participated in the questionnaire, in terms of science classification are given in table 4.

Table 4

Classification of participants according to the types of sciences they teach

	f	%
SP	59	33.3
SA	35	19.8
HP	27	15.3
HA	56	31.6
Total	177	100.0

Note.   SP = soft-pure   f = frequency (number of participants)
SA = soft-applied   HP = hard-pure   SP = soft-applied

Other classifications of the participants were made in terms of their experience levels both at universities in general and specifically at NU. The teachers who had less than three years' teaching experience at universities in general were defined as novice, and the ones who had more than three years' teaching experience at universities were defined as experienced teachers (see Table 5). However, because of time limitations, these classifications were not used in the current analysis.

Table 5

Classifications of participants according to their teaching experience both in general and specifically at NU

		f	%
Overall Experience	Less than 3 years	23	13.0
	More than 3 years	154	87.0
	Total	177	100.0
Experience at NU	Less than 3 years	35	19.8
	More than 3 years	142	80.2
	Total	177	100.0

Note. f = number (frequency) of participants

The participants were also classified according to their academic careers in terms of their having, or not having, M.A. or Ph.D. degrees (see Table 6).

Table 6

Classification of the participants in terms of M.A. and Ph.D. degree

	f	%
Without M.A. degree	53	29.9
With M.A. degree	124	70.1
Total	177	100.0
Without Ph.D.	113	63.8
With Ph.D.	64	36.2
Total	177	100.0

Note. f = number (frequency) of participants

Although such an academic career classification was done in terms of both

M.A. and Ph.D. degrees, only the results in accordance with Ph.D. degrees were used

in this study because of both time limitations and the non-significant results based on

M.A. degrees. Another reason for looking at Ph.D.s is that teachers have to pass a

language proficiency exam to get their Ph.D.s, and are thus considered to have a

higher level of language proficiency than do the teachers without Ph.D.s.

Instruments

A questionnaire (see Appendix B) was used to survey the content course

teachers in this study. The reason to choose a questionnaire as the tool for data

collection was that questionnaires, as Oppenheim (1993) indicates, are research

instruments that require little time and have no extended writing. They have a pure

function of measuring data, and of making group comparisons easy.

The questionnaire for this study was constructed on the basis of both the

researcher's and the content course teachers' teaching experiences, all of whom teach

at the same university. The researcher has been an English course lecturer at NU for

four years, and has frequently had students asking for his help in their content-based

studies for which they needed English language. Considering the students' particular

language demands from him, the researcher has in the past cooperated informally

with the content teachers so as to be able to help the students better. The skills items used in the questionnaire were determined as a combination of the students' language help demands from the researcher and the information informally gained from previous cooperation with the content teachers.

The questionnaire was initially prepared in English. The first draft of the questionnaire was then translated into Turkish by two M.A. TEFL students, and then translated back into English again by two other M.A. TEFL students. The reason for such a process was a double check to ensure that the questionnaire did not have any items that would cause misunderstandings among the participants. The Turkish version of the questionnaire was used for data collection in the study to ensure that every single participant, even the ones who did not know English, understood the questions.

In the questionnaire, there were three types of questions: yes/no, open-ended, and Likert-scale questions. The questionnaire consisted of 80 questions covering three separate areas, e.g. Background Information (Section A), General Knowledge (Section B), and Language Skills section that consisted of separate parts one for each language skill: Writing (Section C); Reading (Section D); Speaking (Section E); and Listening (Section F).

The first section of the questionnaire included four questions to gather data about the teachers' educational backgrounds. The responses given to question 1 in the 'demographic information section', which asked about the schools and departments in which the participants work, were used for the science classification of courses and departments. Question 2 included three options in terms of the teachers' teaching experience in general; teachers having a teaching experience of less than three years,

three to six years, or more than six. Question 3 asked about the length of teaching experience of the participants at NU. Neither question 2 nor question 3 was analysed due to time constraints. Question 4, sought for demographic information about the participants' academic careers. The results of this question were used in the data analysis to find out whether there were differences in the language use requirements of content course teachers in accordance with their educational backgrounds. Moreover, the results calculated in terms of teachers with or without M.A.s were also not analysed separately since they were found to be non-significant.

The questions in section B looked at the teachers' responses about their thoughts on the significance of English in their students' current studies, and the extent of the materials prepared in English for those current studies.

The remaining sections, which can be named as 'skills' sections, include questions related to the use of various language skills. Each section begins with a yes/no question about whether the teachers require the use of that language skill from their students. The participant was not required to give responses to the remaining questions in that section if he or she checked "no" as a response to the initial question.

Again, in each language skill section, there is a Likert-scale question including a list of particular tasks related to that skill. The teachers were asked whether they require the use of that skill for the tasks in the list. In the case of writing, the question asked whether the teacher requires the students to write, for example, essays, research papers, or projects, or in the case of reading, the questions asked whether the teachers require the students to read lecture handouts, manuals, or graphs. In the case of speaking, the questions asked whether the teachers require the

students to speak in English to participate in debates, or oral presentations. In the case of listening, the questions asked whether the teachers require the students to listen, for example, to radio/TV programs in English, or presentations in English.

In the writing, reading, and speaking sections, a second Likert-scale question was asked, investigating the important aspects, or strategies, in the use of that language skill; e.g. expressing the main idea in writing, or in the case of reading, reading for specific information. For the analysis of these Likert-scale questions, respondents who did not complete them were considered to have checked the 'never' or 'not important' options for each item.

The Likert-scale questions in the questionnaire had different choice orders. Thus, the interpretations of means of the responses were different for each type of Likert-scale question. Interpretations were done according to the three scales below:

- 1st Type Choice Scale:

1) Not important: mean values between 1.00 and 1.75

2) Not very important: mean values between 1.76 and 2.50

3) Fairly important: mean values between 2.51 and 3.25

4) Very important: mean values between 3.26 and 4.00

- 2nd Type Choice Scale:

1) None of them: values between 1.00 and 1.80

2) Very few of them: values between 1.81 and 2.60

3) Some of them: values between 2.61 and 3.40

4) Most of them: values between 3.41 and 4.20

5) All of them: values between 4.21 and 5.00

- 3rd Type Choice Scale:

1) Never: values between 1.00 and 1.80

2) Rarely: values between 1.81 and 2.60

3) Sometimes: values between 2.61 and 3.40

4) Usually: values between 3.41 and 4.20

5) Always: values between 4.21 and 5.00

For the skill sections, open-ended suggestion sections were also included to give the participants the opportunity to add in any missing items that they either required of their students or felt were important for their students. However, since no responses were given and no suggestions were made in those sections, no analysis of these could be made.

Procedure

The questionnaire was piloted at Gazi University, which is also a Turkish medium university, on 15-22 April 2002. It was piloted with 20 teachers teaching in different disciplines. The aim of the piloting was to find out whether there were unclear or missing items in the questionnaire questions. The one problem revealed was that a few of the tasks in the skills-sections were very close to each other, so they were combined. After piloting the questionnaire, permission to conduct the questionnaire at NU was obtained from the university administration on 7 May. The actual questionnaire was distributed at NU between the 7-16 May. For faculties and vocational schools located in and close to the city, the questionnaire was distributed and collected by the researcher himself. For those located far away from the city, the questionnaire was distributed and collected either by a contact person or via the

administration. Three hundred and twenty questionnaires were distributed to the whole university, and 177 of them were completed and returned.

Data Analysis

This study investigated the English language use requirements of content course teachers from students in the various vocational schools and faculties of Niğde University. The requirements were investigated in terms of three research questions, and a questionnaire was used to collect the data. The questionnaire was given to the lecturers of all the departments, except for the teachers of the Foreign Languages Department at NU, since they are not content course teachers.

The data reported were analysed using first descriptive statistical techniques, e.g. frequencies and percentages. Then, further statistical analysis including the use of ANOVA, t-tests, Scheffe tests, and one-way chi-square, was made.

For the data analysis, first the data were written out and then statistical calculations were done using the Statistical Package for Social Sciences (SPSS). Different questions on the questionnaire required different statistical techniques. Frequencies and percentages were calculated to have a general view about the participants of the study. Means were calculated to see how much each item in the questionnaire was required from the students. In addition to these, standard deviations were also calculated to prove the extent of agreement in the participants' responses to the questions. The standard value for agreement is 1.00, which means those values greater than 1.00 indicate that participants have marked different choices with little agreement. ANOVAs were calculated to find out differences across and within groups of more than two groups, and Scheffe tests were done to determine which group, or groups, the differences in means came from. T-tests were

calculated to see whether there were differences across and within the responses of two different groups. One-way Chi-squares were calculated to see within group differences, and Pearson Chi-squares were calculated to see across group differences. The standard significance value for Chi-square is 0.05 and the results larger than 0.05 ($p > 0.05$) were considered to be non-significant in this study. In addition, the results lower than 0.02 ($p < 0.02$) are considered as being 'highly significant'.

Conclusion

General information about NU and the participants were given in this chapter. In addition, some basic classifications, which form a basis for the data analysis, such as school or science classifications and scales used in the questionnaire are explained in the methodology section. In the next section, the data will be analysed in terms of several classifications made in this section in relation with the research questions.

CHAPTER 4: DATA ANALYSIS

Overview of the Study

This study investigated the English language use requirements from students of content course teachers in the various vocational schools and faculties of Niğde University (NU). Students at NU take English courses in their first year. All the students in any particular English class are from the same department. The aims of the study were to find out the language skills and particular tasks related to the skills that the content teachers report as having the most priority for the students at NU. Moreover, the study sought to find out whether there are different English language use requirements of teachers at NU based on:

a. Different schools, e.g. faculties or vocational schools.

b. Whether teachers have Ph.D.s and M.A.s.

c. Different sciences, e.g. hard-pure (HP), soft-pure (SP), hard-applied (HA), or soft-applied (SA).

This study was conducted in all the faculties and vocational schools at NU, and data for this needs analysis were collected by a questionnaire. The questionnaire was given to the lecturers of all the departments, except for the teachers of the Foreign Languages Department at NU.

The questionnaire consisted of 80 questions arranged around 17 basic questions in three topics:

Table 7

Types of questions in the questionnaire

	Demographic İnformation	General Information on English language	Language Skills			
			Writing	Reading	Speaking	Listening
N	4	2	27	20	14	13

n = number of questions

In this section of the study, the results of the participants' responses to the questionnaire questions will be analysed in terms of classifications of schools, sciences, and teachers' educational backgrounds. Schools are classified as faculties and vocational schools, and the disciplines are grouped in four science classes that are HP, SP, HA, and SA sciences. Teachers' educational backgrounds were thought of in four terms:

1.   Teachers with M.A.s

2.   Teachers without M.A.s

3.   Teachers with Ph.D.s

4.   Teachers without Ph.D.s

However, the results only in terms of teachers with or without Ph.D.s were used in the data analysis and conclusion sections, because the results in accordance with other groupings were not significant. The results in general are included only in Appendix C as extra information to the readers.

Results of the Questionnaire

In order to determine the coverage reliability of the questionnaire, the view of an expert was sought, and a piloting of the questionnaire was carried out so as to ensure its structural appropriateness and comprehensibility. A factor analysis was done in accordance with the data collected, and revealed that there were no items with a factorial value less than .30. In other words, every questionnaire item has high reliability within itself.

A Cronbach's alpha was calculated to find out the reliability coefficient of the questionnaire in itself, and a value of 0.960 was found. This result indicates a high reliability of the questionnaire as a whole.

Results according to types of schools

<u>The extent of materials in English</u>

In table 8, the responses of the participants to question 6, which asks the extent of the materials in English prepared for the content courses, are compared in accordance with the types of schools in which the teachers work, e.g. faculties or vocational schools. The question is a Likert-scale question, having an order from (1) 'none' to (5) 'all'. The means of the responses are analysed in terms of the values stated in the instruments part of the methodology section.

Table 8

<u>Comparison of teachers' responses on the extent of materials in English in terms of</u>

<u>the types of schools they work</u>

Item		n	m	sd	t
Material	Faculty	102	2.18	1.02	0.27
	Vocational school	75	2.14	0.88	

<u>Note.</u> n = Number of participants m = mean sd = Standard deviation
t = t-test results

Table 8 shows the teachers' views on how much of the materials prepared for their content courses is in English. The mean for the faculties is calculated as 2.18 and that of the vocational schools is 2.14. A t-test was done to see whether there was a significant difference between the means, and there was not found to be significant difference between the responses of the participants from the different types of schools. The teachers from both faculties and vocational schools have reported that 'very few' of the materials prepared for their courses are in English.

<u>Writing Skill</u>

The responses of the teachers who responded to the two questions in the writing section of the 'language skills part' of the questionnaire were compared in terms of the types of schools in which the teachers work, e.g. faculties and vocational

schools. In this part of the questionnaire, there are two Likert-scale questions in two different orders. The first Likert-scale question (items S1-S16) consists of a choice order from (1) 'never' to (5) 'always', and the second question (items D1-D10) consists of a choice order from (1) 'not important' to (4) 'very important'. The means of the responses (displayed in full in Table 1 in Appendix D) are analysed in terms of the values stated in the instruments part of methodology section.

The views of the teachers on their language use requirements from the students in writing skill are compared in terms of the types of schools in which they work. The means of the responses to items S1 to S16 range between 1.00 and 1.08. and the means of the responses given to items D1 to D10 range between 1.03 and 1.14. A t-test was done to see whether there were significant differences within the means, and no significant difference within the items was seen. That is, both groups of teachers 'never' require their students to write anything in English for any of the particular items in this question. In addition, they all think that the specific items existing in the second question in this section are 'not important' for their students' writing skills. The teachers arguably gave such responses to the questions related to writing skill because of the fact that NU is a Turkish medium university, and the students mostly have to express or reflect their knowledge of content in Turkish rather than in English. Actually, there is a similar situation even in English-based universities in Turkey. That is to say, writing skill is not so much required even in English medium universities (Alpaslan, 2002).

Reading Skill

In table 9, the teachers' responses to the questions in the reading section of the questionnaire are compared in terms of the types of schools in which the teachers

work. There are two questions in this section. One includes ten items in it (O1-O10) and the other has nine items (OO1-OO9). Both sets are Likert-scale questions with an order from (1) 'never' to (5) 'always'.

Table 9

Comparison of Teachers' Reading Requirements in terms of School Classification

Item		n	m	Sd	t
O1	Faculty	102	1.51	1.07	1.42
	Vocational school	75	1.30	0.83	
O2	Faculty	102	1.76	1.21	3.72**
	Vocational school	75	1.18	0.67	
O3	Faculty	102	1.08	0.34	2.19*
	Vocational school	75	1.00	0.00	
O4	Faculty	102	1.65	1.21	3.30**
	Vocational school	75	1.14	0.65	
O5	Faculty	102	1.52	1.09	2.71**
	Vocational school	75	1.14	0.63	
O6	Faculty	102	1.34	0.88	2.27*
	Vocational school	75	1.09	0.40	
O7	Faculty	102	1.80	1.31	3.83**
	Vocational school	75	1.17	0.64	
O8	Faculty	102	1.55	1.12	2.61**
	Vocational school	75	1.17	0.70	
O9	Faculty	102	1.43	0.93	3.24**
	Vocational school	75	1.06	0.30	
O10	Faculty	102	1.58	1.07	3.32**
	Vocational school	75	1.13	0.57	
OO1	Faculty	102	1.76	1.29	3.06**
	Vocational school	75	1.24	0.85	
OO2	Faculty	102	1.72	1.21	3.60**
	Vocational school	75	1.17	0.62	
OO3	Faculty	102	1.61	1.16	2.83**
	Vocational school	75	1.18	0.71	
OO4	Faculty	102	1.65	1.23	3.05**
	Vocational school	75	1.17	0.70	
OO5	Faculty	102	1.59	1.15	2.82**
	Vocational school	75	1.17	0.70	
OO6	Faculty	102	1.37	0.90	1.76
	Vocational school	75	1.16	0.61	
OO7	Faculty	102	1.57	1.08	3.25**
	Vocational school	75	1.13	0.55	
OO8	Faculty	102	1.67	1.21	3.32**
	Vocational school	75	1.16	0.67	
OO9	Faculty	102	1.54	1.14	2.63**
	Vocational school	75	1.16	0.67	

Note. N = Number of participants   M = mean   SD = Standard deviation
* = p<.05   ** = p<.01

In table 9, teachers' views on their language requirements from their students in terms of reading skills are compared in accordance with the types of schools in which the teachers work. The means of the responses given to both groups of items range between 1.00 and 1.80, which refers to the 'never' level on the whole. A t-test was done to see whether there were significant differences within the means, and it is seen that almost all items, except for the items 'O1' and 'OO6', have significant differences within themselves. That is to say, teachers in both the faculties and vocational schools never require their students to read lecture handouts in English, or to read in English for understanding the viewpoint of the author. On the other hand, the remaining items in this section have significant differences within themselves. The first group of items includes the ones asking the extent of teacher requirements from students in reading reference sources (O2), exam papers (O3), on the internet (O4), articles in weekly magazines (O5), newspapers (O6), articles in professional journals (O7), user manuals (O8), reports (O9), and graphs or tables (O10) written in English. The second group consists of the items asking the extent of teacher requirements from students in reading for specific information (OO1), general information (OO2), main idea (OO3), drawing conclusions (OO4), understanding the logical relations within a text (OO5), realising general unknown vocabulary (OO7), realising the unknown terminology (OO8), and making inferences (OO9). When the standard deviations in each item were examined and compared with each other in terms of the types of schools, it was seen that there were disagreements between the responses of the teachers in the faculties, revealing that the teachers in faculties in fact require more reading skills in English from their students in terms of the items included in the reading section of the questionnaire than do the teachers in the

vocational schools. Or perhaps the participants who checked 'yes' and responded to the questions in this section were mostly the teachers at faculties.

<u>Speaking Skill</u>

The responses of the teachers to the questions about their language use requirements from their students in terms of speaking skill are compared according to the types of schools in which they work, e.g. faculties and vocational schools (displayed in full in Table 2 in Appendix D). In this section, there are two questions. One question includes six items and the other consists of seven items. Both questions are Likert-scale questions, but they have different orders. The first group of items, 'K1' and 'K6', is ordered from (1) 'never' to (5) 'always' while the second group 'KK1' and KK7' are ordered from (1) 'not important' to (4) 'very important'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

The analysis shows the teachers' responses to the questions in the speaking skill section. The means of all the responses given to the first group of items are lower than 1.80, which refers to 'never'. Similar to this, none of the means of the responses given to the second group of questions are greater than 1.75, which refers to 'not important'. That is, on the whole, the teachers both in faculties and vocational schools 'never' require their students to speak in English for any of the items in the first group, and they find the items in the second group 'not important'. A t-test was done to see whether there were significant differences within the means of the items, and no 'p' values lower than 0.05 were seen. That is to say, within each item, there is no significant difference between the responses of teachers from different types schools. These results refer to the conclusion that speaking skills are considered to be

'not important' in any of the content courses at NU, and are 'never' required to be used by the students in their studies related to the content courses they are taught.

Listening Skill

A comparison was also made of teacher requirements in terms of listening skills in English in accordance with the schools in which they work. The section includes only one question, consisting of 12 items, with an order from (1) 'never' to (5) 'always'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

In this section, teachers' requirements of English language listening skills in relation to the content courses were compared in terms of the schools in which the teachers work, e.g. faculties and vocational schools (displayed in full in Table 3 in Appendix D). The means of teachers' responses were between 1.01 and 1.15, which means that, on the whole, the teachers from both types of schools never want their students to listen in English for any of the items included in the question. A t-test was done to see whether there were differences between the responses of teachers from different types of schools within each item, and it was found that there were no 'p' values lower than 0.05. This means that there were no significant differences between the responses of the teachers from different types of schools within any of the items. The conclusion coming out of these results is that the use of listening skill in English is required from students neither in the faculties nor in vocational schools.

Summary

In the previous section, the responses of teachers to the questions in the language skills section, which ask about the teachers' requirements from their students in terms of the use of the four language skills, are compared in accordance

with the types of schools in which the teachers work, e.g. faculties or vocational schools. As a general conclusion, when the means of the responses are examined as a whole, it is seen that the teachers both in the faculties and vocational schools, in general, consider all of the language skills in English 'not important', and they, again in general, 'never' require their students to use any of the language skills in their studies. That is, there is no significant difference between the responses of the teachers in general. Similar to the general results, nor is any significant difference seen within any of the items included in the questions in the writing, speaking, and listening parts of the language skills section, in other words, each of those items is required to be used, or considered to be important, to the same extent by the teachers both from faculties and vocational schools.

However, when each item included in the reading skills part is taken into consideration individually, a significant difference is found within the responses. The results of this part, shown in table 9, show that all the items, except for reading lecture handouts and reading for understanding of the author's attitude, are required by the teachers in the faculties to a greater extent than by teachers in the vocational schools. This may be because the faculties have a longer educational period, which means that they cover more detailed and more intensive course content than those of the vocational schools. In addition to this, the difference between the teachers' educational backgrounds, which will be discussed in the conclusion section, in the faculties and vocational schools may be another reason for this result. A reason for the difference between the reading and the other skills may be that the number of participants who responded to the reading section was more than the number of the participants who did not respond to this section.

Results according to teachers' educational backgrounds

The extent of materials in English

In table 10, the responses of the participants to question 6, which asks the

extent of the materials in English prepared for the content courses, are compared in

terms of teachers' educational backgrounds, e.g. teachers without Ph.D.s and

teachers with Ph.D.s. The question is a Likert-scale question, with an order from (1)

'none' to (5) 'all'. The means of the responses are analysed in terms of the values

stated in the instruments part of methodology section.

Table 10

Comparison of teachers' responses on the extent of materials in English in terms of

the teachers' having Ph.D.s or not.

Item		n	m	sd	t
Materials	Without Ph.D.s	113	2.07	0.92	1.82
	With Ph.D.s	64	2.34	1.01	

Note. n = Number of participants   m = mean   sd = Standard deviation
* = p<.05   ** = p<.01

Table 10 shows the comparison of teachers' responses about how much of the

materials prepared for their content courses is in English. The mean for the teachers

without Ph.D.s is calculated as 2.07 and that of the teachers with Ph.D.s is calculated

as 2.34. A t-test was done to see whether there was a significant difference between

the responses of the teachers with and without Ph.D.s, and it was found that the value

of 'p' was greater than 0.05, in other words, there was no significant difference

between the responses of the two groups. The conclusion that can be drawn from this

result is that teachers both with and without Ph.D.s state that very few of the

materials prepared for their content courses are in English.

Writing Skill

In table 11, teacher responses to the questions in the writing section under the 'language skills part' of the questionnaire are compared in terms of the teachers' educational backgrounds, e.g. teachers with and without Ph.D.s (displayed in full in Table 4 in Appendix D). In this part of the questionnaire, as mentioned before in the instruments part of methodology section, there are two Likert-scale questions; the first including the items between 'S1' and 'S16', and the second question consisting of the items 'D1' and 'D10'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

Table 11

Comparison of writing requirements of teachers with or without Ph.D.s

Item		n	m	sd	t
S3	Without Ph.D.s	113	1.00	0.00	2.58**
	With Ph.D.s	64	1.09	0.38	
S4	Without Ph.D.s	113	1.00	0.00	2.90**
	With Ph.D.s	64	1.18	0.68	
S8	Without Ph.D.s	113	1.00	0.00	2.55**
	With Ph.D.s	64	1.14	0.58	
S9	Without Ph.D.s	113	1.00	0.00	2.20*
	With Ph.D.s	64	1.06	0.30	
S10	Without Ph.D.s	113	1.00	0.00	2.55**
	With Ph.D.s	64	1.14	0.58	
S11	Without Ph.D.s	113	1.00	0.00	3.07**
	With Ph.D.s	64	1.15	0.54	
S12	Without Ph.D.s	113	1.01	0.18	2.20*
	With Ph.D.s	64	1.12	0.45	
S13	Without Ph.D.s	113	1.00	0.00	2.93**
	With Ph.D.s	64	1.12	0.45	
S16	Without Ph.D.s	113	1.00	0.00	3.16**
	With Ph.D.s	64	1.17	0.57	
D3	Without Ph.D.s	113	1.01	0.18	2.47**
	With Ph.D.s	64	1.15	0.54	
D6	Without Ph.D.s	113	1.01	0.18	1.98*
	With Ph.D.s	64	1.12	0.51	

Note. n = Number of participants   m = mean   sd = Standard deviation
* = p<.05   ** = p<.01

Table 11 shows the comparison of teachers' responses about their requirements of English writing skills in terms of the teachers' own educational backgrounds. The means of the responses in the first group of items (S1-S16) range between 1.00 and 1.17, all of which refer to 'never' in the rank order in general. Similar to this, the means of the responses to the second group of items (D1-D10) are between 1.01 and 1.21, all of which refer to 'not important' in the rank order. The general results of these means are that the teachers both with and without Ph.D.s never require the use of writing for the first group of items, and they consider the second group of writing items as being 'not important' in the students' current studies related to their content courses.

A t-test was done to see whether there were significant differences within the means of each item itself, and it was discovered that there were significant differences within some items. The items with significant difference are items (S3) preparing presentations, (S4) writing research papers, (S8) writing projects, (S9) writing descriptions of experiments, (S10) writing e-mails, (S11) writing personal letters, (S12) writing biographies, (S13) writing faxes, (S16) writing business letters, (D3) relevance of ideas to the content, and (D6) adequate development of ideas. The means of the two educational groups were compared within each of these items, and it was seen that the means of the responses of the teachers with Ph.D.s were significantly greater than those of the teachers without Ph.D.s. In other words, the teachers with Ph.D.s want their students to prepare presentations and write research papers, projects, descriptions of experiments, e-mails, personal letters, biographies, faxes, and business letters in English more than do the teachers without Ph.D.s. Another result is that teachers with Ph.D.s give more importance to the skills of

making clear the relevance of ideas to the content and displaying adequate development of ideas in their students' written works in English. The first reason for such results may stem in part because the teachers with Ph.D.s may know English better than the teachers without Ph.D.s. This judgment can be made because only those teachers with Ph.D.s have had to pass an English Proficiency exam to be able to continue their academic careers, and the second reason may be that teachers with Ph.D.s do more detailed and intensified studies at a high academic level than do the teachers without Ph.D.s. As a result, the combination of these factors may lead to teachers with Ph.D.s having themselves a higher level of English language knowledge, and thus higher expectations of their students' limited writing in English.

Reading Skill

Table 12 shows the comparison of teacher responses to the questions about reading section under the 'language skills section' of the questionnaire in terms of the teachers' educational backgrounds, e.g. teachers with or without Ph.D.s. In this part of the questionnaire, as mentioned before in the instrument section of methodology section, there are two Likert-scale questions both with an order from (1) 'never' to (5) 'always'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

Table 12

Comparison of reading requirements of teachers with or without Ph.D.s

Item		n	m	sd	t
O1	Without Ph.D.s	113	1.31	0.91	2.00*
	With Ph.D.s	64	1.62	1.07	
O2	Without Ph.D.s	113	1.23	0.75	5.01**
	With Ph.D.s	64	2.01	1.30	
O3	Without Ph.D.s	113	1.01	0.18	2.21*
	With Ph.D.s	64	1.10	0.36	
O4	Without Ph.D.s	113	1.20	0.73	4.20**
	With Ph.D.s	64	1.85	1.34	
O5	Without Ph.D.s	113	1.22	0.77	2.78**
	With Ph.D.s	64	1.62	1.14	
O6	Without Ph.D.s	113	1.12	0.51	2.79**
	With Ph.D.s	64	1.43	0.97	
O7	Without Ph.D.s	113	1.29	0.85	4.01**
	With Ph.D.s	64	1.96	1.39	
O8	Without Ph.D.s	113	1.20	0.73	3.56**
	With Ph.D.s	64	1.73	1.25	
O9	Without Ph.D.s	113	1.11	0.45	3.91**
	With Ph.D.s	64	1.56	1.05	
O10	Without Ph.D.s	113	1.20	0.72	3.81**
	With Ph.D.s	64	1.73	1.13	
OO1	Without Ph.D.s	113	1.34	0.98	3.09**
	With Ph.D.s	64	1.89	1.33	
OO2	Without Ph.D.s	113	1.29	0.88	3.49**
	With Ph.D.s	64	1.84	1.19	
OO3	Without Ph.D.s	113	1.28	0.89	2.67**
	With Ph.D.s	64	1.70	1.17	
OO4	Without Ph.D.s	113	1.30	0.93	2.54**
	With Ph.D.s	64	1.71	1.22	
OO5	Without Ph.D.s	113	1.27	0.86	2.55**
	With Ph.D.s	64	1.67	1.18	
OO6	Without Ph.D.s	113	1.19	0.66	1.96*
	With Ph.D.s	64	1.43	0.97	
OO7	Without Ph.D.s	113	1.19	0.69	3.88**
	With Ph.D.s	64	1.73	1.15	
OO8	Without Ph.D.s	113	1.23	0.76	3.99**
	With Ph.D.s	64	1.85	1.33	
OO9	Without Ph.D.s	113	1.24	0.85	2.47**
	With Ph.D.s	64	1.62	1.16	

Note. n = Number of participants   m = mean   sd = Standard deviation
* = p<.05   ** = p<.01

In table 12, teachers' responses to the questions about reading in English are compared in terms of the teachers' educational backgrounds. The means of the responses are between 1.01 and 1.96, which results in two different interpretations. Means between 1.00 and 1.80 indicate that these are the items 'never' required in general, but means that are between 1.81 and 2.60 are considered as being 'rarely' required from the students. When the responses are considered as a whole, it is seen that teachers with Ph.D.s require all the items that are at least 'rarely' required, namely (O4) reading on the internet, (O7) reading articles in academic journals, (OO1) reading for a specific information, (OO2) reading for general information, and (OO8) reading for unknown terminology.

A t-test was done to see whether there were significant differences between the means of the responses within each item, and it is seen that all the 'p' values in the test are lower than 0.05. This indicates that there is a significant difference within the means of all these items. When the differences within the means for each item are examined, it is found that the means of the responses of the teachers with Ph.D.s are greater than are those of the teachers without Ph.D.s. That is, teachers with Ph.D.s require the use of every reading item from their students in this section more than do the teachers without Ph.D.s. This may be because the teachers with Ph.D.s are more experienced in academic studies, they know the English language better, they are more aware of the literary references and sources of their contents, and, thus, they feel more comfortable to ask their students to do more reading in English.

Speaking Skill

Table 13 presents a comparison of the responses of the teachers who responded to the speaking skill questions in terms of the teachers' educational

backgrounds, and only the significant results are presented in the table (displayed in full in Table 5 in Appendix D). As mentioned before in the instrument part of methodology section, there are two Likert-scale questions asked in this section. The first question has six items (K1-K6) with an order from (1) 'never' to (5) 'always'. The second question includes 7 items (KK1-KK7) with an order between (1) 'not important' and (4) 'very important'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

Table 13

Comparison of speaking requirements of teachers with or without Ph.D.s

Item		n	m	sd	t
K4	Without Ph.D.s	113	1.00	0.10	2.33*
	With Ph.D.s	64	1.10	0.44	
KK2	Without Ph.D.s	113	1.02	0.20	2.38**
	With Ph.D.s	64	1.18	0.66	
KK3	Without Ph.D.s	113	1.00	0.10	2.33*
	With Ph.D.s	64	1.14	0.58	
KK6	Without Ph.D.s	113	1.01	0.13	2.23*
	With Ph.D.s	64	1.14	0.55	
KK7	Without Ph.D.s	113	1.01	0.13	2.50**
	With Ph.D.s	64	1.17	0.63	

Note. n = Number of participants   m = mean   sd = Standard deviation
* = $p<.05$ ** = $p<.01$

  Table 13 shows the comparison of teacher responses to the two sets of speaking skill questions, in terms of the teachers' educational backgrounds. When the means of the responses are considered as a whole, it is seen that they are between 1.00 and 1.10 for the first question, and between 1.00 and 1.18 for the second question. Thus we can conclude that, in general, both groups of teachers never require the use of the speaking items in the first question, and they, again in general, state that the items in the second question are not important in the students' studies related to their content courses.

Apart from the differences in the means in general, a t-test was done to see whether there were significant differences between the means of the responses of groups within each item. As a result, it is seen that there are significant differences between the means of the teachers' responses within five items (see table 13 above): (K4) speaking in seminars, (KK2) knowledge of academic terminology; (KK3) knowledge of grammar; (KK6) comprehensibility of the content in speech; and (KK7) giving the intended message. The means of the two different groups' responses in each of these items are compared with each other, and the results of the comparison show that teachers with Ph.D.s require the use of speaking skill in seminars more than do the teachers without Ph.D.s. In addition to this, they give more importance to knowledge of academic terminology, knowledge of grammar, comprehensibility of the content in speech, and the ability to give the intended message in speech significantly more than do the teachers without Ph.D.s. A reason for this result may again be that the English language proficiency level of the teachers with Ph.D.s is possibly higher than that of the teachers without Ph.D.s, thus they have higher English language expectations than do the others in terms of studies at the academic level.

Listening Skill

Table 14 shows the comparison of teacher responses to the listening section questions in terms of the teachers' educational backgrounds. There are 12 Likert-scale items ranging between (1) 'never' and (5) 'always'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

Table 14

Comparison of Listening Requirements of Teachers with or without Ph.D.s

		n	m	sd	t
Din1	Without Ph.D.s	113	1.06	0.24	0.97
	With Ph.D.s	64	1.10	0.40	
Din2	Without Ph.D.s	113	1.04	0.33	1.29
	With Ph.D.s	64	1.12	0.48	
Din3	Without Ph.D.s	113	1.03	0.29	1.39
	With Ph.D.s	64	1.10	0.40	
Din4	Without Ph.D.s	113	1.07	0.48	1.99*
	With Ph.D.s	64	1.28	0.86	
Din5	Without Ph.D.s	113	1.01	0.18	2.47**
	With Ph.D.s	64	1.18	0.68	
Din6	Without Ph.D.s	113	1.00	0.10	2.36**
	With Ph.D.s	64	1.17	0.72	
Din7	Without Ph.D.s	113	1.00	0.10	2.47**
	With Ph.D.s	64	1.15	0.62	
Din8	Without Ph.D.s	113	1.00	0.00	3.20**
	With Ph.D.s	64	1.14	0.46	
Din9	Without Ph.D.s	113	1.00	0.00	2.93**
	With Ph.D.s	64	1.12	0.45	
Din10	Without Ph.D.s	113	1.00	0.00	2.56**
	With Ph.D.s	64	1.12	0.51	
Din11	Without Ph.D.s	113	1.00	0.10	2.31*
	With Ph.D.s	64	1.12	0.51	
Din12	Without Ph.D.s	113	1.01	0.18	2.60**
	With Ph.D.s	64	1.20	0.71	

Note. n = Number of participants   m = mean   sd = Standard deviation
* = $p<.05$ ** = $p<.01$

In table 14, twelve items focusing on the teacher requirements from their students in terms of the use of speaking skills are examined. The means of the responses to the items are compared in accordance with the teachers' educational backgrounds in general, and it is seen that the means show a variation between 1.00 and 1.28. As a general conclusion of this result, the mean of the responses of the teachers whether with or without Ph.D.s is at the level of 'never'. A t-test was done to see whether there were significant differences between the means of the teachers' responses according to educational background, and it is seen that there are

significant differences between the means within all items except for (Din1) listening to radio programs, (Din2) listening to TV programs, and (Din3) listening to video and cinema programs. For these three items, the conclusion is that both groups of teachers 'never' require their students to do any of them. However, it is shown that for the remaining 9 items, the requirements are different between groups. The remaining nine items are: (Din4) listening to the words, phrases, and statements used in the lessons; (Din5) listening to the instructions in English given during the lessons; (Din6) listening to the debates done in the lessons; (Din7) listening to daily life speeches; (Din8) listening to seminars in English; (Din9) listening to presentations in English; (Din10) listening to telephone conversations in English; (Din11) listening to telephone messages in English; and (Din12) listening to the speeches of foreigners dealing with the same discipline. The table shows that for these items, the means of the responses of the teachers with Ph.D.s are greater than those of the teachers without Ph.D.s, in other words, teachers with Ph.D.s require the use of these listening skills more than do the teachers without Ph.D.s. The results are, in fact, somewhat surprising, because NU is a Turkish medium university in which the lectures are given in Turkish, a fact completely confirmed by several content course teachers when I questioned them after these results were calculated. In other words, there is an apparent conflict between what they do in the classroom and what they report that they require from their students. In other words, at least some teachers report that they require their students to follow lessons in English, listen to seminars or presentations in English, or listen to foreigners' speeches in English, while none of this arguably occurs at NU.

<u>Summary</u>

To conclude, in a general sense, similar to the comparison of language use requirements according to school classification, teachers at Niğde University regardless of educational background, 'never' require their students to use the four language skills in English, and in general find those skills 'not important' as a general means of their responses. However, in contrast to the results in terms of school classification, in which there is a significant difference between the means of responses only in the reading section, the means of teachers' responses within most of the items do vary when investigated in terms of teachers' educational backgrounds. The results show that teachers with Ph.D.s require the use of English from their students in their content-based studies to a greater extent than do the teachers without Ph.D.s. The difference between the results of the means in general and within items shows that some teachers with Ph.D.s have marked choices referring to higher requirements of these skills, while the teachers without Ph.D.s have almost exclusively checked 'never' or 'not important' in their responses, or that the teachers who responded to the language skills sections are mostly the ones who have Ph.D.s and the others are considered as responding 'no' to those questions.

<div align="center">Results according to science classification</div>

<u>The extent of materials in English</u>

In table 15, the responses of the participants to question 6, which asks the extent of the Materials in English prepared for the content courses, are compared in terms of science classification, e.g. SP sciences, SA sciences, HP sciences, and HA sciences. The question is a Likert-scale question with an order from (1) 'none' to (5)

'all'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

Table 15

Comparison of teachers' responses on the extent of materials in English in terms of science classification

			n	m	sd	f	Mean Difference
Material	1	SP	59	1.88	0.78	7.31**	1-4
	2	SA	35	1.94	0.87		2-4
	3	HP	27	2.14	1.06		
	4	HA	56	2.62	0.98		

Note. n = Number of participants   m = mean   sd = Standard deviation   f = variance
* = p<.05   ** = p<.01

In table 15, the responses of the teachers about the extent of materials in English prepared for their content courses are examined, and are investigated to see whether the means of teachers' responses vary in accordance with different sciences. It is seen that the means of the responses as a whole show a variance between 1.88 and 2.62. That is, when interpreted according to the values given in the methodology section, teachers teaching HA sciences state that some of the materials prepared for their courses are in English, while the teachers in the soft-pure (SP), hard-pure (HP), and soft-applied (SA) sciences state that very few of the materials prepared for their courses are in English. A variation analysis (ANOVA) was conducted to see whether there were significant differences between the means. The result was an f-value of greater than 3.00 indicating a significant difference between the means of the responses in the different sciences. A Scheffe test was done to see which group, or groups, created the difference. As a result of this test, it was realised that there are significant differences between the means of the SP and HA sciences, and between those of the SA and HA sciences. When the means of the responses are compared

within themselves, it is seen that the extent of materials prepared in English are far greater in the HA sciences than they are in the SP and SA sciences.

Writing Skill

The following section compares the means of the participants' responses about the use of writing skill in terms of science classification. Two questions were examined. The first question, which includes 16 items (S1-S16), is a Likert-scale question with an order from (1) 'never' to (5) 'always'. The second question investigated in the table consists of 10 items (O1-O10) and has an order from (1) 'not important' to (4) 'very important'. The means of the responses (displayed in full in Table 6 in appendix D) are analysed in terms of the values stated in the instruments part of the methodology section.

The means of the teachers' responses to the first question were found to vary between 1.00 and 1.22. That is to say, when compared in terms of science classification in general, teachers 'never' require the particular writing tasks covered in these items. The means of the responses given to the other question are the same, which means that teachers from different sciences consider the items in the second question 'not important' on average. A variation analysis test (ANOVA) was conducted to check whether the differences in sciences create differences in the responses of the teachers, and it was seen that there were no f-values greater than 3.00 or p-values lower than 0.05. This indicates that there is no significant difference between the means of teachers' responses across any of the sciences. It can be concluded that neither the teachers' writing skill use requirements nor the teachers' viewpoints about the importance of writing skills change according to the different sciences.

<u>Reading Skill</u>

This section looks at the teachers' responses to the questions about the use of reading skills. A comparison was done to see whether there were differences between the means of teachers' responses to these questions according to the different sciences. There were two questions examined. The first question includes 10 items (O1-O10), and the second includes nine items (OO1-OO9). Both questions have the same rank order, which is between (1) 'never' and (5) 'always'. The means of the responses (displayed in full in Table 7 in Appendix D) are analysed in terms of the values stated in the instruments part of methodology section.

Table 16

<u>Comparison of reading requirements of teachers in accordance with science classification</u>

			n	m	sd	f	Mean Difference
02	1	SP	59	1.25	0.70	4.22**	1-3
	2	SA	35	1.40	0.94		
	3	HP	27	1.07	1.46		
	4	HA	56	1.60	1.10		
O7	1	SP	59	1.25	0.86	4.05**	1-3
	2	SA	35	1.37	0.91		
	3	HP	27	1.07	1.32		
	4	HA	56	1.67	1.28		
OO2	1	SP	59	1.23	0.81	2.43	
	2	SA	35	1.51	1.09		
	3	HP	27	1.85	1.32		
	4	HA	56	1.57	1.02		

<u>Note.</u> n = Number of participants   m = mean   sd = Standard deviation   f = variance
* = <u>p</u><.05   ** = <u>p</u><.01

The means of teacher responses were analysed and compared in terms of science classification to see whether the responses of the teachers vary according to the different sciences. Both Likert-scale questions in this section are examined

together since they have the same rank order. The means of the responses in the table were found to vary between 1.02 and 1.85. According to the values given in the methodology section, these mean values correspond to 'never', and values between 1.81 and 2.60 correspond to 'rarely'. It was found that all the means were lower than 1.80 except for one, which was the mean of the responses of teachers in the HP sciences to item OO2, which refers to 'reading for general information'. In other words, the analysis also revealed that the teachers of HP sciences state that they 'rarely' require their students to read for general information while they 'never' require 'reading skill' for the other items. Another result seen in the table is that the teachers in the sciences other than HP sciences 'never' require the use of reading skill from their students for any of the items in these two questions. One reason for such a result may be that the teachers who responded to this section were mostly the teachers of hard-pure sciences.

Apart from the general interpretation, a variation analysis test (ANOVA) was done to see whether there were significant differences within the means in terms of science classification. As shown in table 16, a significant difference was seen only in two items: item O2, which investigates the use of reading reference sources such as dictionaries, and item O7, which is about reading articles in professional (academic) journals. A Scheffe test was done to understand which sciences were the sources of the differences, and it was found that the differences in both items were between SP and HP sciences. When the means of the two sciences in those items are examined, it is shown that the means of SP sciences are greater than those of HP sciences, which indicates that teachers in the SP sciences have stated that their requirements for reading reference sources and articles in professional (academic) journals from their

students are greater than those of the teachers in HP sciences, or those who checked those two items were most probably the teachers of soft-pure sciences.

Speaking Skill

The next section provides both an analysis of teachers' views on their students' use of speaking skill in their current studies and a comparison between the means of the participants' responses to the questions about the use of speaking skill in terms of science classification. Two questions were examined, the first including six items (K1-K6), and the second consisting of seven items (KK1-KK7). Both questions are Likert-scale questions, but they have different choice orders. While the choices in the first question are ordered from (1) 'never' to (5) 'always', those in the second question are ordered between (1) 'not important' and (4) 'very important'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section. Only the significant results are shown in table 17 below, and the complete results are given in Table 8 in appendix D.

Table 17

Comparison of speaking requirements of teachers in accordance with science classification

			n	m	sd	f	Mean Difference
K1	1	SP	59	1.00	0.00	8.11**	1-3
	2	SA	35	1.00	0.00		2-3
	3	HP	27	1.25	0.44		3-4
	4	HA	56	1.05	0.29		

Note. n = Number of participants   m = mean   sd = Standard deviation   f = variance
* = p<.05   ** = p<.01

In terms of the teachers' views on their speaking skill use requirements from their students, the means were found to vary between 1.00 and 1.25. This indicates that, on average, the teachers in all the sciences 'never' require their students to

speak in English, and they think that the English speaking skills in the second question are 'not important' for their students. This is an average result coming out of the means of the responses in general. A variation analysis test (ANOVA) was made to examine the results in a more detailed way, and revealed that there were significant differences between the means in item 'K1', which is about the use of speaking skill to take part in the debates in the lessons. A Scheffe test was done to define from which science group, or groups, the differences were emerging, and it was seen that the mean of the HP sciences had significant differences with those of each of the other sciences. When the means for this item are examined, it can be said that the highest mean is found in the responses of the teachers of the HP sciences. That is, teachers in the HP sciences are more likely to require students to speak in English in debates during the lessons, than are the teachers in other sciences, or perhaps mostly the HP science teachers responded to this section. The disciplines of this science mostly deal with numbers, and, possibly, the respondents considered speeches for interpretations of graphs or tables as debates.

Listening Skill

An analysis of teachers' responses to the question asking about their requirements of listening skills was made (full results in table 9 in Appendix D). A comparison was made between the means of the participants' responses to these questions in terms of science classification. One question was examined. This question is a Likert-scale question, with 12 items and an order between (1) 'never' and (5) 'always'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

Table 18

Comparison of listening requirements of teachers in accordance with science

classification

			n	m	sd	f	Mean Difference
Din1	1	SP	59	1.03	0.18	6.10**	1-3
	2	SA	35	1.00	0.00		2-3
	3	HP	27	1.29	0.54		3-4
	4	HA	56	1.07	0.32		

Note. n = Number of participants   m = mean   sd = Standard deviation   f = variance
* = p<.05   ** = p<.01

The means were found to vary between 1.00 and 1.37, which indicates that in

general the teachers from all sciences 'never' require the use of listening skill from

their students. For a more in-depth interpretation of the results, a variation analysis

test (ANOVA) was done to see whether the difference in sciences created a

significant difference between the means of the responses within each item, and it

was realised that, in item 'Din1' (listening to radio programs in English), the mean of

the responses of the teachers in the HP sciences was significantly different from

those in each of the other sciences. A Scheffe test was done to see where the

difference came from, and a greater value of mean was realised in the HP sciences.

The result indicates that either teachers in the HP sciences want their students to

listen to radio programs in English, which are in fact not available in Turkey, to a

greater extent than do the teachers in any of the other sciences, or that the responses

taken into consideration here belonged to the teachers of hard-pure sciences.

Summary

In the case of writing, a majority of teachers 'never' required English

language use, and there seemed to be no difference between the requirements of

sciences. On the other hand, in the case of reading, speaking, and listening, it was

found that the HP sciences created differences when compared with the other sciences, and it was the science whose teachers required English language use more than did the teachers of the other sciences. That is to say, possibly, the teachers who responded to the language skills sections were the ones mostly from the hard-pure sciences.

Results of the importance of English in content studies

In table 19, the responses of the teachers to the question asking about the importance of English in their students' current content-based studies are shown. In addition, the means of those responses are compared in terms of science classification. The question is a Likert-scale question with a choice order from (1) 'not important' to (5) 'very important'. The means of the responses are analysed in terms of the values stated in the instruments part of methodology section.

Table 19

Comparison of teachers' responses on the importance of English language in the students' current content course studies in general

			n	m	sd	f	Mean Difference
Importance of English	1	SP	59	2.57	0.96	1.95	
	2	SA	35	2.82	0.85		
	3	HP	27	2.74	0.85		
	4	HA	56	2.98	0.90		

Note. n = Number of participants   m = mean   sd = Standard deviation   f = variance
* = p<.05   ** = p<.01

In table 19, the means vary between 2.57 and 2.98, indicating that the teachers in all sciences consider English fairly important in their students' current content-based studies. In addition to this general interpretation, a variation analysis test (ANOVA) was done to see whether there were significant differences between the means of the responses in terms of science classification. However, no significant

difference is seen, which means that all the teachers consider English important to the same extent.

Conclusion

In the section above, the data collected from the content course teachers were analysed in accordance with several classifications such as school, science, and educational backgrounds. The analysis was made in accordance with means and standard deviations of the responses. In the next chapter, the results, or findings, revealed in the data analysis section will be discussed referring to the research questions, and implications for both pedagogical issues and further research will be made.

CHAPTER 5: CONCLUSION

Overview of the Study

This study investigated the English language use requirements of content

teachers at Niğde University (NU). Data were collected from the content teachers in

all faculties and vocational schools at NU through a questionnaire. The questionnaire

investigated the background information of the participants, the thoughts of the

participants on the relation between English language and their content areas, and the

reported requirements of teachers from the students in terms of the use of language

skills.

Data were analysed using descriptive statistics including frequencies,

percentages, chi-square, ANOVA, and t-tests. The research questions to be answered

in the study were:

1.   What are the academic English language use requirements of content

course teachers from their students at NU, which is a Turkish medium university?

2.   According to the English language use requirements of content course

teachers, what English language skills have the most priority for the students

studying at NU?

3.   Are there different English language use demands of the content

course teachers from their students at NU in terms of:

    a.   Different schools, e.g. faculties or vocational schools.

    b.   Whether teachers have Ph.D.s and M.A.s.

    c.   Different sciences, e.g. hard-pure (HP), soft-pure (SP), hard-applied

       (HA), or soft-applied (SA).

If so, what are they?

In this chapter, the research questions will be answered by discussing the results of the questionnaire in terms of language skills. The means, maximum values, and the standard deviations are taken into consideration while discussing the results.

Discussion

Research Question 1: What are the academic language use requirements of content course teachers from their students at NU, which is a Turkish medium university?

The means of the responses to language use demands in general (see tables 1 to 7 in Appendix C) vary between 1.01 and 1.54, which suggests that the content teachers at NU do not require English in academic language use for any of the language skills. On the other hand, the maximum values indicate that every single choice for each question has been checked at least one time. In other words, even though a majority of respondents has checked the lower end options of 'not important', 'not very important', 'never', and 'rarely', or has not responded to the language skills sections, there are some who have checked each of the other options of 'sometimes', 'usually', 'always', or 'fairly important', 'very important'. Thus, we can say that in fact, there is some language use requirement for every item on the questionnaire.

The means of the responses to the first group of writing questions (see table 1 in Appendix C), labelled S1 through S16, and referring to particular writing tasks, reveal that, in general, the content teachers at NU never require writing any of the items in this group from their students. On the other hand, the maximum values again show that every choice in these questions is marked by at least one participant, which indicates that writing each item in this question is required by at least one teacher.

The standard deviations, however, are lower than 1.00 for every item, meaning that the teachers have a great agreement on the first choice, which refers to 'never' on the scale. That is, in general, there is very little, almost no, English writing requirement by content teachers from their students in terms of the items in this group of questions. When the second group of writing questions, those labelled D1 through D10, and referring to particular writing strategies, are considered, a similar conclusion to the first group is realised (see table 2 in Appendix C). In fact, there is at least one teacher finding each item 'fairly important' or 'very important', but the standard deviations of the responses reveal that there is a great agreement that the items in this group of questions are unimportant. That is to say, the majority of the teachers at NU think that the tasks connected with writing are not important for the students' current studies in their content courses.

The reading section also includes two types of questions, the first (items O1 through O10) looks at tasks related to reading (see table 3 in Appendix C), and the second (items OO1 through OO9) looks at reading strategies (see table 4 in Appendix C). When the results for these questions are examined, the means of the responses indicate that content teachers at NU 'never' require their students to read any of the items in these questions. On the other hand, the maximum values show that each choice from 1 (never) to 5 (always) for every single item, except for the item O3 (reading exam papers) in which 3 (sometimes) is chosen at most, is marked by at least one person. In respect to the agreement of the participants on reading requirements, the low standard deviations indicate that teachers agree on the first choice, which refers to 'never', in their responses to items O1 (reading lecture handouts in English), O3 (reading exam papers in English), O5 (reading articles on

weekly magazines in English), O6 (reading newspapers in English), O8 (reading manuals and brochures in English), O9 (reading reports in English), O10 (reading graphs and tables in English), OO6 (reading to understand the author's attitude), OO7 (reading to understand general unknown vocabulary), and OO9 (reading for making inferences), which means that most content teachers at NU never require their students to do any of the items above.

The standard deviations of the other items, which are O2 (reading reference sources in English), O4 (reading in English on the internet), O7 (reading articles on academic journals in English), OO1 to OO5 (reading for specific information, general information, main idea, making conclusions, and understanding the logical relation within the text), and OO8 (reading for terminology related to the content), are greater than 1.00. That is, when compared with the other items in the same question, there is less agreement among teachers' responses. The disagreement may have come out of the contextual differences (e.g. classification of sciences, classification of schools, teachers' educational backgrounds) among the participants. Whatever it is, the conclusion is that the items investigated in these questions are, to a great extent, never required by the content teachers from their students. On the other hand, when the standard deviations of the responses in terms of all skills are examined, the standard deviations that are greater than 1.00 are seen only in the second group of reading skill questions, which means that teachers have the least agreement on the lower end of choices for the items in this group. That is, considering the standard deviations, English reading skill is required more in these than the other skills.

With respect to speaking skills, the means of the responses (see tables 5 and 6 in Appendix C) indicated that the majority of content teachers at NU never require the use of speaking skill for the items between K1 and K6, and they think that the speaking items between KK1 and KK7 are, to a great extent, not important in the students' current studies about their content courses. Although the maximum values show that every choice is marked at least once, the standard deviations indicate that there is a great agreement between the responses of the participants. That is, there is a negligible number of teachers requiring the use of speaking skills from their students.

The results of the listening section (see table 7 in Appendix C) are very similar to those in the speaking section mentioned above. There is a variance in the choices of teachers, which means that almost all the choices are marked in every item. However, the means and standard values reveal that there is a great agreement between teachers on the first choice that refers to 'never', which means that a majority of the teachers at NU never want their students to listen to the items examined in the listening section. Variance in the choices may have resulted from contextual differences (e.g. classification of sciences, classification of schools, etc.), or from differences in the educational backgrounds of the teachers.

In conclusion, when the responses are examined in general without any classification, e.g. science classification, school classification, or educational background classification, all the items for every language skill are required by at least one teacher at NU, although the means for all the items reveal that, to a great extent, they are not required from the students and they are considered to be not important in the students' current content course studies. A reason for this result may

be that speaking and writing skills are considered as being productive skills (Brown, 1996), and the teachers think that the students are not good enough at English language to cope with such productive skills. Moreover, the lack of opportunities for students to practice listening may be a reason for the teachers' not requiring this skill. The apparent disagreement between the means, which shows that there is almost no academic English language use requirement, and the maximum values, which indicate that every item is required by at least one teacher, may have come out of contextual differences among teachers (e.g. different schools, sciences, or educational backgrounds), which will be examined further while answering the research question 3 below.

Research Question 2: According to the English language use requirements of content course teachers, what English language skills have the most priority for the students studying at NU?

The results of the study revealed that the means of the responses given to the language skill questions were greater in reading than those in the other three skills. That is, although English language was never required by a majority of the teachers for any of the language skills, there was less consensus on the unimportance and lack of necessity of reading in English among teachers. Therefore, it can be claimed that reading is the English language skill that has the most priority for the students at NU. A reason for such a result may be that more teachers have responded to the reading section than have responded to the other skill sections.

Research Question 3-a: Are there different English language use demands of the content course teachers from their students at NU in terms of different schools, e.g. faculties or vocational schools. If so, what are they?

In respect to the writing skill requirements of teachers at NU, the results (see table 1 in Appendix D) indicated that a majority of the teachers both in the faculties and the vocational schools do not require their students to do any writing in English, and writing is considered as not important by a great number of teachers. There is no difference in the responses in terms of school classification, nor is any item found to have priority over the others. One reason for these results may be the limited number of respondents who responded to the writing section.

In terms of reading skill, the requirements of content teachers vary for some items. In general, when the means are considered as a whole (see table 9), it is seen that a great many teachers both at faculties and vocational schools do not require the use of reading from their students. On the other hand, there are also some teachers who do want their students to read in English in their current content-based studies. When the means are compared within each item in accordance with school classification, the results reveal that teachers at faculties require reading from their students to a greater extent than do teachers at vocational schools. Such a result may have come out of the fact that faculties have a longer educational process than that of the vocational schools, which leads in the faculties to more detailed and intensive content, and thus requirements, than in the vocational schools. This is, actually, a result that seems to fit with the results of the reading skills investigation done in accordance with the educational backgrounds of teachers, specifically, whether they have Ph.D.s or not. Those results revealed that reading skills are much more required by teachers with Ph.D.s than by ones without Ph.D.s. It was indicated before in the data analysis section that the respondents of the reading section were most probably the teachers of faculties, therefore the relationship between these results and those in

terms of school classification may be that, possibly, a majority of the teachers with Ph.D.s are working in faculties rather than vocational schools.

When speaking and listening skills are examined within each item, the results (see tables 3 and 4 in Appendix D) reveal that a majority of the teachers, both at faculties and vocational schools, do not require speaking and listening skills from their students. It possibly means that most teachers did not respond to these sections. This finding may be the result of teachers' thinking that speaking and listening skills are non-academic, or the university's not providing external opportunities to the teachers to have their students use these skills.

Research Question 3-b: Are there different English language use demands of the content course teachers from their students at NU in terms of whether teachers have Ph.D.s or M.A.s? If so, what are they?

When examined in general with respect to teachers' having Ph.D.s or not (tables 11, 13, and 14), the majority of the teachers at NU never require writing, speaking, and listening skills from their students. That is, in general, the greatest number of teachers, no matter whether they have Ph.D.s or not, responded to the reading skill section rather than the other sections, which possibly means that they thought that writing, speaking, and listening skills are not as important in the students' current content-based studies. However, when each of the items in these skills sections is investigated individually in terms of the teachers' educational backgrounds, the results showed some differences among the few teachers who responded to them. The differences were seen in items S3 (preparing written presentations in English), S4 (writing research notes in English), S8 (writing projects in English), S9 (writing descriptions of experiments in English), S10 (writing e-mails

on the internet in English), S11 (writing personal letters in English), S12 (writing memos in English), S13 (writing fax messages in English), K4 (speaking in English in seminars), KK2 (terminology in English related to the content), KK3 (Grammar), KK6 (Intelligibility and comprehensibility in speech), KK7 (conveying the message), Din 4 (to follow words, expressions, and statements used in the lessons), Din5 (to follow instructions in English given in the lessons), Din6 (to understand debates in English in the lessons), Din7 (to understand daily conversations), Din8 (to understand seminars in English), Din9 (to understand presentations in English), Din10 (to understand telephone conversations in English), Din11 (to understand telephone messages in English), and Din12 (to understand conversations of foreigners studying on the same content). The comparison of the requirements in terms of these items revealed that the teachers with Ph.D.s had higher expectations and requirements from their students, and they gave more importance to the items stated above than did the teachers without Ph.D.s. This may be a result of the fact that teachers with Ph.D.s have more extensive and professional studies than do those of the teachers without Ph.D.s, and they are more aware of the international features and usage of English. Another result, and perhaps the most significant reason, may be that they themselves know English more than do the teachers without Ph.D.s and they are therefore able to use the language in their teaching. Thus, they may feel more confident in requiring English language use from the students.

In terms of reading skill, there were different conclusions investigated (table 12). Teachers in general marked 'rarely' for five items in the reading section, which are O4 (reading on the Internet), O7 (reading articles in academic journals, OO1 (reading for specific information), OO2 (reading for general information), and OO8

(reading for unknown terminology). When these results were compared in terms of the teachers' educational backgrounds, it is seen that the requirements of teachers with Ph.D.s in terms of both these five items and also the other reading items were greater than were those of teachers without Ph.D.s. In particular, in the case of the questions about using the internet and reading professional articles, this result may reflect a greater professional consciousness, or awareness of the disciplinary scholarship, on the part of those teachers with Ph.D.s.

The results of the data were analysed, but not interpreted in accordance with M.A.s. The reason is that there were not significant results. Considering the limited time to do the study, they were not considered as being considerable enough to be dealt with.

Research Question 3-c: Are there different English language use demands of the content course teachers from their students at NU in terms of different sciences, e.g. HP, SP, HA, and SA sciences? If so, what are they?

When the results are examined in terms of writing skill (table 8 in Appendix D), it is revealed that few teachers in any of the sciences required writing requirements from their students. In addition, a majority of the teachers in all sciences thought of writing skill as unimportant in the students' current content-based studies. This may be because teachers in all sciences think of writing skill as a time consuming skill, which may prevent them from focusing on the content. It also reflects the fact that the undergraduate level writing skill is a neglected skill even in the top English-medium universities in Turkey. That is, even in such universities like Middle East Technical University (METU), writing is rarely required to any significant extent at the undergraduate level (see Alpaslan, 2002). Moreover, based

on anecdotal evidence and personal experience, it can be said that in Turkish universities, even writing in the students' native language of Turkish is to some extent an undervalued skill, with the obvious exception of note taking.

With respect to reading skills, the results in table 16 revealed that the teachers in the HP sciences required 'reading for general information' while the other items were never required by the majority of teachers in any of the sciences, including the HP ones. When each item was examined individually, it was realised that there were differences between the responses of the teachers across different sciences only in two items, which were O2 (reading reference sources) and O7 (reading articles in academic journals). The differences were found between SP and HP sciences, and the comparison of the means revealed that teachers in the SP sciences required their students to read reference sources and articles in academic journals much more than did the teachers in the HP sciences. In fact, these results were unexpected ones. Since academic sources in the HP science arguably deal more with numbers, figures, or calculations than with words, as they seem to in the SP sciences, one might expect a greater use of English texts for reading in the hard sciences, because, simply, the students might be more able to handle it. A possible explanation may be that, since HP sciences seem to have more connection with numbers, the teachers in the HP sciences may have not considered these numerically based texts as 'reading'.

Conclusion

As a conclusion, very few English language use requirements of teachers from their students in terms of all four skills are revealed in the study in general. On the other hand, the survey revealed that the teachers found English language 'fairly important' for their students (see table 19). This conflict is most probably a result of

two reasons. One reason may be that the content teachers think that their students do not have adequate English proficiency to cope with the language in their academic content studies, and the other reason may be that the teachers do not know the language enough themselves. In other words the teachers may have concerns based on both their own and their students' limited English language proficiency. Considering such results, there may be two implications made. One is on the teachers' part, that is, the Turkish High Education Council, or Yüksek Öğretim Kurulu (YÖK), should try to have the teachers improve their language proficiency levels by encouraging them or by imposing some legal requirements. The other is on the students' part, that is, we should improve the students' English education, which may be possible by setting up preparatory classes or, at least, increasing the English course hours per week. More details on the implication for the students' English education are discussed below.

Admittedly, NU is a Turkish medium university, so a lot of English may not be expected. However, sometimes English may be necessary for the students to get the latest, most up-to-date knowledge in the field, to be competitive in their field upon graduation, or to ease their ability to complete tasks in their classes. It is for these reasons, possibly, that we see at least some teachers demanding English usage despite the overwhelming majority who do not. Such individual decisions to require English language use of their students reflect both a serious assessment of the importance of the particular English language task or skill, as well as confidence and ability on the part of the teachers to ask the students to do the particular tasks in English.

Pedagogical Implications

First of all, even before examining the results of this study, it can safely be argued that the Foreign Languages Department should demand more English course hours from the administration to be able to set up language courses enough to cover the content course teachers' requirements, even though they are limited. Moreover, despite the fact that significant skills emerged based on all three classifications: science, school, and educational background, there should be a department categorisation in accordance with science classification. The reason for categorising the departments in terms of science classification is that it would be an easier way to design an appropriate curricula that can address to some individual needs of different sciences/disciplines without requiring separate curricula for each and every department. Such a categorisation would best be carried out in cooperation with the content course teachers. That is, more in-depth information about the nature and features of each department may be obtained from the lecturers of each department and then the departments should be grouped in different sciences, which would make it possible to define the English language use requirements of different disciplines relying upon the results of this study and further needs assessment investigations that are suggested in the paragraph below.

This study revealed that reading is considered to be the most required skill. Therefore, the curricula should include reading skills courses to a greater extent than the other skills. In particular, reading texts should be chosen in cooperation with the content teachers to meet the English and content course requirements together. Considering that reading skill is the highest priority skill required by the content course teachers and the difficulty of creating such a combined lesson at first, a good

primary step to do this may be to include terminological vocabulary studies through simple content-based texts for one hour every week to meet the language needs of students in terms of both discipline related English and general English.

Speaking, writing, and listening are the skills that are at least required. Therefore, they should be included in the curricula to a lesser extent. Instead, more time should be spent on vocabulary studies and reading.

Limitations of the Study

No data were collected showing the teachers' own English language ability, and thus no correlation could be sought to support some of the assumptions made as explanations for the findings.

Since there were no significant results, the data in terms of teachers' educational backgrounds, e.g. teachers with or without MA, and teachers' experience levels both in general and at NU were not interpreted in the study. Given the limited time, it was considered unwise to deal with non-significant results.

During the data collection process, the researcher met with administrative difficulties. The problem was that there were exams at NU at the same time that the researcher was distributing the questionnaire, and this complicated the researcher's attempts to reach all the lecturers at NU. Fortunately, with great effort, 177 questionnaires (55%) were collected.

One more, perhaps most important, limitation was about what the respondents understood and how they responded to the questions on the questionnaire. That is, the respondents may have responded to the questions in accordance with what they would wish to require from students rather than what they actually require. Such a problem may have occurred because the researcher did not

have enough time and opportunity to make explicit explanations to every respondent while distributing the questionnaire. If the researcher had had enough time to reach every respondent, surprising results, which may negatively affect the reliability of the study, such as 'listening to radio programs in English' would perhaps not have occurred.

Implications for Further Research

Further needs analyses should be conducted to investigate the academic language needs from different viewpoints, e.g. from the viewpoints of the language teachers, the students' perspective on their felt or perceived needs, academic language needs from graduate students' perspective, the administration's needs, or even occupational needs to determine four different curricula, each appropriate to a different science. Before determining each curriculum, the results of comparative studies with other universities could be taken into consideration together with the analyses mentioned above.

Conclusion

In this study, first the literature on 'needs analysis' was reviewed to make the reader aware of the role of needs in language teaching. Then, information about how the study was prepared and conducted was given in the methodology section. The data were reported and interpreted in the 'data analysis section'. Possible explanations were made on those results in the 'conclusion section' replying to the research questions on which the study is based. In addition, certain limitations of the study were presented together with some implications for pedagogical aspects and further research based on the results of the data.

REFERENCES

Alison, D. (1996). Pragmatist discourse and English for academic purposes. *English for Specific Purposes, 15 (2)*, 85-103.

Alparslan, Ö. (2002). *Writing strategies used by three freshman students at Middle East Technical University*. Unpublished MA Thesis, Bilkent University. Ankara, Turkey.

Bachman, L. F. & Strick, G. J. (1978). An analytic approach to language program design. In R. Mackay & A. Mountford (eds.), *English for specific purposes*. (pp.21-37). London: Longman.

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.

Berwick, R. (1989). Needs assessment in language programming: From theory to practice, ends/means specification. Johnson R. K. (ed.), *The second language curriculum*. (pp.49-62). Cambridge: Cambridge University Press.

Brindley, G. (1989). The role of needs analysis in adult ESL program design. Johnson R. K. (Ed.). *The second language curriculum*. (pp.63-78). Cambridge: Cambridge University Press.

Brown, J. D. (1995). *The elements of language curriculum*. Boston: Heinle & Heinle.

Canseco, G., & Byrd, P. (1989). Writing required in graduate courses in business administration. *TESOL Quarterly, 23 (2),* 305-316.

Carter, D. (1983). Some propositions about ESP. *The ESP Journal, 2,* 131-137.

Casanave, C., & Hubbard, P. (1992). The writing assignments and writing problems of doctoral students: Faculty perceptions, pedagogical issues, and needed research. *English for Specific Purposes, 11,* 33-49.

Chan, V. (2001). Determining students' language needs in a tertiary setting. *English Teaching Forum, July 2001,* 16-27.

Chia, H.L., Johnson, R., Chia, Hui-L., & Olive, F. (1998). English for college students in Taiwan: A study of perceptions of English needs in a medical context. *English for Specific Purposes, 18 (2),* 107-119.

Cohen, S. E., Kirschner, M., & Wexler, C. (2001). Designing EAP reading courses at the university level. *English for Specific Purposes, 20,* 367-386.

Graves, K. (2000). *Designing language courses: A guide for teachers*. Boston: Heinle & Heinle.

Hayland, K. (2000). Book Review of 'Developments in English for specific purposes: a multi-disciplinary approach'. *English for Specific Purposes, 19*, 297-301.

Horowitz, D. M. (1986). What professors actually require: Academic tasks for the ESL classroom. *TESOL Quarterly, 20 (3)*, 445-462.

Hutchinson, T. & Waters, A. (1987). *English for specific purposes.* Cambridge: Cambridge University Press.

Jenkins, S., Jordan, M., & Weiland, P. (1993). The role of writing in graduate engineering education: A survey of faculty beliefs and practices. *English for Specific Purposes, 12,* 51-67.

Johns, A. M. (1981). Necessary English: A faculty survey. *TESOL Quarterly, 15 (1),* 51-57.

Johns, A. M. (1991). English for specific purposes (ESP): Its history and contributions. In M. Celce-Murcia (ed.), *Teaching English as a second language.* (pp.67-77). Boston: Heinle & Heinle.

Jordan, R. R. (1997). *English for academic purposes*. Cambridge: Cambridge University Press.

Kaufman, R. (1995). *Mapping educational success: Strategic thinking and planning for school administrators.* Thousand Oaks, California: Corwin Press, Inc.

Mackay, R. (1978). Identifying the nature of the learner's needs. In R. Mackay & A. Mountford (eds.), *English for specific purposes*. (pp.21-37). London: Longman.

Masuhara, H. (1998). What do teachers really want from coursebooks? In B. Tomlinson, (ed.) *Materials development in language teaching.* Cambridge: Cambridge University Press, (pp. 240-247).

Oppenheim, A. N. (1992). *Questionnaire design, interviewing and attitude measurement*. New York: Printer publishers Ltd.

Pratt, D. (1980). *Curriculum design and develoment.* New York: Harcourt Brace Jovanovich.

Richards, J. C. (1990). *The language teaching matrix*. Cambridge: Cambridge University Press.

Russell, D. R. (1991). *Writing in the academic discipines, 1870-1990: A curricular history.* Carbondale: Southern Illinois University Press.

Schutz, N. W. & Derwing, B. L. (1981). The problem of needs assessment in English for specific purposes: Some theoretical and practical considerations. In R. Mackay & J. D. Palmer (eds.), *Language for specific purposes program design and evaluation*. (pp.29-45). Rowley, MA: Newbury House.

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)*.

Smith, C. E. (1989). *Needs assessment guide*. Tennessee: Department of Education.

Stern, H. H. (1992). *Issues and options in language teaching*. Oxford: Oxford University Press.

Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.

Sysoyev, P. V. (2000). *Developing an English for specific purposes course using a learner centred approach: A Russian experience*. Retrieved January 1, 2002 from http://iteslj.org/Techniques/Sysoyev-ESP.html.

Teaching Teachers. A Handbook for Supervisors, (1985). The Consortium Teacher Training Task Force in Thailand (CTTTF). Pattaya: Thailand.

Valdez, Maribel G. (1999). How learners' needs affect syllabus design. *Forum, 37 (1)*. (available as ERIC Document Service: EJ599387).

Van Ek, J. A. (1983). *The threshold level of modern language learning in schools*. London: Longman.

APPENDIX A

List of Departments According to Science Classification

Table 1

List of Departments in Accordance with Science Classification

Name of the science	Name of the department
Hard-pure Sciences	Mathematics
	Physics
	Chemistry
	Biology
	Science
Soft-pure Sciences	Nursery
	Medical Documentation/Secretariat
	Accountancy
	Business Administration
	Economics
	Turkish Literature
	History
Hard-applied Sciences	Civil Engineering
	Radio/TV Programming
	Mechanical Engineering
	Electrical/Electronics Engineering
	Environmental Engineering
	Geological Engineering
	Automotive
	Furniture Decoration
Soft-applied Sciences	Tourism and Hotel Services
	Education of Social Sciences
	Primary Education
	Education of Science
	Physical Education

APPENDIX B

PART I: QUESTIONNAIRE IN TURKISH

> Bu anket Türkçe eğitim veren bir üniversite olan Niğde Üniversitesindeki Yabancı Diller Bölümü dışındaki bölüm hocalarının öğrencilerinden İngilizce kullanımı taleplerini araştırmak amacıyla hazırlanmıştır. Amaç, öğretim elemanlarını değerlendirmek değildir. Lütfen isminizi yazmayınız.
>
> Anketi tamamlamanız, verdiğiniz cevapların bu çalışmada kullanılmasına izin vermeniz olarak yorumlanacaktır. Soruları eksiksiz ve dikkatli bir şekilde doldurmak için zamanınızı ayırdığınız için teşekkür ederim.

BÖLÜM-A / ÖZGEÇMİŞ

1. Halen Niğde Üniversitesinde hangi fakülte, yüksek okul, ve bölümde ders vermektesiniz?

Fakülte   : _____

Yüksekokul   : _____

Bölüm   : _____

2. Meslek dalınızda kaç yıldır eğitim vermektesiniz?

   1) 3 yıldan az   2) 3-6 yıl arası   3) 6 yıldan fazla

3. Niğde Üniversitesinde kaç yıldır çalışmaktasınız?

   1) 3 yıldan az   2) 3-6 yıl arası   3) 6 yıldan fazla

4. Tamamladığınız (mezun olduğunuz) programlar.

	Okul	Bölüm	Yıl
a. Lisans	_____	/ _____	/ _____
b. Yüksek lisans	_____	/ _____	/ _____
c. Doktora	_____	/ _____	/ _____

BÖLÜM-B / GENEL BİLGİLER

5. Öğrencilerinizin bilim dallarıyla ilgili mevcut çalışmalarında İngilizce ne kadar önemlidir? Uygun olan seçeneği işaretleyiniz.

  1) önemsiz 2) çok önemli değil   3) oldukça önemli   4) çok önemli

6. Dersinizde öğrencileriniz için hazırlanan materyallerin ne kadarı İngilizce'dir?

  1) hiçbiri   2) çok az kısmı   3) bir kısmı   4) çoğu   5) hepsi

BÖLÜM C / YAZMA

7. Öğrencileriniz derslerinizle ilgili çalışmaları için İngiliz dilinde herhangi bir

    yazı yazmak zorundalar mı? (Eğer cevabınız hayır ise D bölümüne geçiniz.)

    1) evet   2) hayır

8. Öğrencileriniz derslerinizle ilgili olarak aşağıda verilen amaçların her biri için

    İngilizce yazmaya ne kadar ihtiyaç duymaktadırlar? Lütfen bu soruyu aşağıda

    verilen sıralamaya uygun olarak ve bu sıralamadaki rakama karşılık gelen

    kutucuğu (√) işaretleyerek cevaplayınız.

    1) asla   2) nadiren   3) bazen   4) genellikle   5) daima

		1	2	3	4	5
S.1.	Sınavlarda kısa yazılar (paragraflar) yazmak					
S.2.	Sınavlarda kısa cevap gerektiren soruları cevaplamak					
S.3.	Sunumlar hazırlamak					
S.4.	Araştırma yazıları yazmak					
S.5.	Sınıfta not tutmak					
S.6.	Not yazmak					
S.7.	Kompozisyon yazmak					
S.8.	Proje yazmak					
S.9.	Deney anlatımı yazmak					
S.10.	Elektronik posta mesajları yazmak					
S.11.	Kişisel mektuplar yazmak					
S.12.	Özgeçmiş yazmak					
S.13.	Fax yazmak					
S.14.	Laboratuar raporları yazmak					
S.15.	Günlük tutmak					
S.16.	İş mektupları yazmak					

    Diğerleri – (Lütfen detaylı belirtiniz): _____

9. Öğrencilerinizin İngilizce yazım çalışmalarında aşağıdakiler sizin için ne kadar önemlidir? Lütfen bu soruyu aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakama karşılık gelen kutucuğu (√) işaretleyerek cevaplayınız.

1) önemsiz   2) çok önemli değil   3) oldukça önemli   4) çok önemli

		1	2	3	4
D.1.	Ana fikrin iyi ifade edilmesi				
D.2.	Dilbilgisi kurallarına uygunluk				
D.3.	Fikirlerin konuya uygunluğu				
D.4.	Fikirler arasında uygun geçişler				
D.5.	Fikirlerin sıralanması (fikirlerin uygun düzenlenmesi)				
D.6.	Fikirlerin yeterli ve yerinde gelişimi				
D.7.	Fikirlerin orijinalliği				
D.8.	Uygun kelime kullanımı				
D.9.	İyi derecede akademik kelime hazinesi kullanımı				
D.10.	İmla, noktalama, düzenleme (format), vs.				

Diğerleri – (lütfen ayrı ayrı belirtiniz): _____

BÖLÜM-D / OKUMA

10. Öğrencileriniz derslerinizle ilgili çalışmaları için hiç İngilizce okuma yapmak zorundalar mı? (Eğer cevabınız hayır ise lütfen E bölümüne geçiniz.)

    1) evet   2) hayır

11. Öğrencilerinizin aşağıdakilerin her birini, ne sıklıkta okumalarını istiyorsunuz? Lütfen bu soruyu aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakama karşılık gelen kutucuğu (√) işaretleyerek cevaplayınız.

    1) asla   2) nadiren   3) bazen   4) genellikle 5) daima

		1	2	3	4	5
O.1.	Ders notları					
O.2.	Referans kaynakları (örneğin: sözlükler)					
O.3.	Sınav kağıtları					
O.4.	Internet yazıları (örneğin: elektronik posta mesajları)					
O.5.	Haftalık dergilerdeki makaleler					
O.6.	İngilizce gazeteler					
O.7.	Akademik (profesyonel) dergilerdeki makaleler					
O.8.	Talimat kitapçıkları					
O.9.	Kullanma broşürleri / Kullanıcı el kitapları					
O.10.	Raporlar					
O.11.	Grafikler, şemalar, tablolar, vs					

Diğerleri – (Lütfen detaylı belirtiniz): _____

12. Öğrencileriniz derslerinizle ilgili çalışmaları için aşağıdaki okuma

becerilerinden her birine ne kadar ihtiyaç duymaktadırlar? Lütfen bu soruyu

aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakama karşılık

gelen kutucuğu (√) işaretleyerek cevaplayınız.

1) asla   2) nadiren   3) bazen   4) genellikle 5) daima

		1	2	3	4	5
OO.1.	Belirli bir bilgi için okuma					
OO.2.	Genel bilgi için okuma					
OO.3.	Ana fikir için okuma					
OO.4.	Sonuçlar çıkarmak amacıyla okuma					
OO.5.	Parçanın kendi içindeki mantığını (mantık bağlantısını) anlama amacıyla okuma					
OO.6.	Yazarın bakış açısını anlama amacıyla okuma					
OO.7.	Bilinmeyen genel kelimeler için tarama amaçlı okuma					
OO.8.	Bilim dalıyla ilgili kelimeleri anlama amaçlı okuma					
OO.9.	Çıkarım yapmak amacıyla okuma					

Diğerleri – (lütfen detaylı belirtiniz): _____

BÖLÜM-E / KONUŞMA

13. Öğrencileriniz derslerinizle ilgili çalışmaları için İngilizce konuşmak zorundalar mı? (Eğer cevabınız hayır ise, lütfen F bölümüne geçiniz.)

    1) evet   2) hayır

14. Öğrencileriniz derslerinizle ilgili çalışmalarında aşağıda verilen amaçların her biri için İngilizce konuşmaya ne kadar ihtiyaç duymaktadırlar? Lütfen bu soruyu aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakama karşılık gelen kutucuğu (√) işaretleyerek cevaplayınız.

    1) asla   2) nadiren   3) bazen   4) genellikle   5) daima

		1	2	3	4	5
K.1.	Sınıf içi tartışmalara katılmak					
K.2.	Sınıfta sorular sormak					
K.3.	Sözlü raporlar sunmak					
K.4.	Seminerlerde konuşma yapmak					
K.5.	Telefon konuşmaları yapmak					
K.6.	Günlük konuşma dilini kullanmak					

Diğerleri – (Lütfen detaylı belirtiniz): _____

15. İngilizce konuşma açısından, öğrencilerinizin derslerinizle ilgili çalışmalarında başarılı olabilmesi için, aşağıda verilen maddelerin her birini ne kadar önemli buluyorsunuz? Lütfen bu soruyu aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakama karşılık gelen kutucuğu (√) işaretleyerek cevaplayınız.

    1) önemsiz   2) çok önemli değil   3) oldukça önemli   4) çok önemli

		1	2	3	4
KK.1.	Genel (akademik olmayan) kelime bilgisi				
KK.2.	Bilim dalıyla ilgili akademik kelime bilgisi				
KK.3.	Gramer				
KK.4.	Telaffuz				
KK.5.	Akıcı konuşma (tereddütsüz ve duraksamadan konuşma)				
KK.6.	Anlaşılır ve açık konuşma (konunun anlaşılırlığı)				
KK.7.	Verilmek istenen mesajı ifade edebilme				

Diğerleri – (Lütfen detaylı belirtiniz): _____

BÖLÜM-F / DİNLEME

16. Öğrencileriniz derslerinizle ilgili çalışmaları için İngilizce dinleme yapmak zorundalar mı? (Cevabınız hayır ise, lütfen anketi burada bitiriniz.)

      1) evet   2) hayır

17. Öğrencileriniz derslerinizle ilgili çalışmaları için aşağıda verilenlerin her birini dinlemeye ne kadar ihtiyaç duymaktadırlar? Lütfen bu soruyu aşağıda verilen sıralamaya uygun olarak ve bu sıralamadaki rakama karşılık gelen kutucuğu (√) işaretleyerek cevaplayınız.

    1) asla   2) nadiren   3) bazen   4) genellikle   5) daima

Din.1.	İngilizce radyo programları					
Din.2.	İngilizce televizyon programları					
Din.3.	İngilizce video ve sinema filmleri					
Din.4.	Derslerde kullanılan İngilizce kelime, terim, ve tanımlamaları					
Din.5.	Ders süresince verilen sözlü İngilizce talimatları					
Din.6.	Derslerde İngilizce yapılan tartışmaları					
Din.7.	Günlük konuşmaları					
Din.8.	İngilizce seminerleri					
Din.9.	İngilizce sunumları					
Din.10.	İngilizce telefon konuşmaları					
Din.11.	İngilizce telefon mesajları					
Din.12.	Aynı bilim dalıyla ilgilenen yabancıların İngilizce konuşmaları					

Diğerleri – (Lütfen detaylı belirtiniz): _____

PART II: QUESTIONNAIRE IN ENGLISH

> **This questionnaire has been prepared to investigate the English language use requirements of content course teachers from the students at Niğde University, which is an example of Turkish medium universities. The aim is not to evaluate the teachers. Please, do not sign your name.**
>
> **Your completion of the questionnaire is assumed to grant permission to use your answers for this study. Thank you for taking the time to answer the questions fully and thoughtfully.**

PART I: BACKGROUND INFORMATION

1. Which faculty, technical school, and department are you currently teaching at Niğde University?

   Name of the faculty   : _____
   Name of the technical school : _____
   Name of the department   : _____

2. How long have you been teaching in your profession?

   1) less than 3 years   2) 3 to 6 years   3) more than 6 years,

3. How long have you been teaching at Niğde University?

   1) less than 3 years   2) 3 to 6 years   3) more than 6 years

4. Degree Programs completed.

	School	**department**	**year**
a. B.A. / B. S. in	_____	/ _____	/ _____
b. M.A. / M.S. in	_____	/ _____	/ _____
c. PhD in	_____	/ _____	/ _____

GENERAL INFORMATION

5. According to you, how important is English language for your students' current content-based studies?

   1) not important   2) not very important

   3) fairly important   4) very important

6. How much of the materials prepared for your students in your course are in English?

   1) none   2) little   3) some   4) most   5) all

SECTION-C / WRITING

7. Do your students ever have to do any kind of writing in English for your course?

   (If no, you may proceed to section D.)

   1) yes   2) no

8. To what extent do your students need writing in English for each of the following purposes for your course? Please answer this question putting a tick (√) into the space referring to the number relevant to your answer according to the rank order given below:

   1) never   2) rarely   3) sometimes   4) usually   5) always

		1	2	3	4	5
S.1.	to write essays in exams					
S.2.	to answer short-answer questions in exams					
S.3.	to prepare presentations					
S.4.	to write research papers					
S.5.	to take notes in the class					
S.6.	to write notes					
S.7.	to write compositions					
S.8.	to write projects					
S.9.	to write descriptions of experiments					
S.10.	to write e-mail messages					
S.11.	to write personal letters					
S.12.	to write memos					
S.13.	to write faxes					
S.14.	to write lab reports					
S.15.	to write diaries					
S.16.	to write business letters					

other(s) – (please specify in details): _____

9. To what extent are the following important for you while you are evaluating your students' written assignments in English? Please answer this question putting a tick (✔) into the space referring to the number relevant to your answer according to the rank order given below:

1) not important   2) not very important

3) fairly important   4) very important

		1	2	3	4
D.1.	good expression of the main idea				
D.2.	grammatical accuracy				
D.3.	relevance of ideas to the context				
D.4.	appropriate connections between ideas				
D.5.	sequence of ideas				
D.6.	adequate development of ideas				
D.7.	originality of thoughts				
D.8.	appropriate use of non-academic vocabulary				
D.9.	use of academic vocabulary				
D.10.	mechanics (spelling, punctuation, format, etc.)				

other(s) – (please specify in details): _____

Section-D / READING

10. Do your students ever have to read anything in English for your course?

(If no, you may proceed to section E.)

1) yes   2) no

11. To what extent do you want your students to read each of the following in English?

Please answer this question putting a tick (✔) into the space referring to the number

relevant to your answer according to the rank order given below:

1) never   2) rarely   3)sometimes   4) usually   5) always

		1	2	3	4	5
O.1.	Lecture handouts					
O.2.	Reference tools (e.g. dictionaries)					
O.3.	Examination papers					
O.4.	On the Internet (e.g. e-mail messages)					
O.5.	Articles from weekly magazines / periodicals					
O.6.	Newspapers in English					
O.7.	Articles from professional journals					
O.8.	Instruction booklets / User manuals					
O.9.	Reports					
O.10.	Graphs, charts, tables, etc.					

Other(s) – (Please specify in details): _____

12. To what extent do your students need each of the following reading skills? Please

answer this question putting a tick (✔) into the space referring to the number

relevant to your answer according to the rank order given below:

1) never 2) rarely 3) sometimes 4) usually 5) always

		1	2	3	4	5
OO.1.	reading for specific information					
OO.2.	reading for general information					
OO.3.	reading for main idea					
OO.4.	drawing conclusions					
OO.5.	understanding logical relations within the text					
OO.6.	understanding the writer's attitude / point of view					
OO.7.	scanning for unknown words in general					
OO.8.	realizing terminology					
OO.9.	making inferences					

other(s) – (please specify in details): _____

SECTION-E / SPEAKING

13. Do your students ever have to speak in English for your course?

(If no, you may proceed to the section F.)

1) yes   2) no

14. To what extent do your students have to speak in English for each of the following purposes for your course? Please answer this question putting a tick (✔) into the space referring to the number relevant to your answer according to the rank order given below:

1) never   2) rarely   3) sometimes   4) usually   5) always

		1	2	3	4	5
K.1.	to participate in classroom discussions					
K.2.	to ask questions in class					
K.3.	to present oral reports					
K.4.	to speak at seminars					
K.5.	To speak on the telephone					
K.6.	To speak in informal daily life situations					

other(s) – (please specify in details): _____

15. To what extent do you consider each of the following items to be important in English-based speaking, in terms of their usage in class for your students to be successful in your course? Please answer this question putting a tick (✔) into the space referring to the number relevant to your answer according to the rank order given below:

1) not important   2) not very important

3) fairly important   4) very important

		1	2	3	4
KK.1	Non-academic vocabulary				
KK.2	Academic vocabulary specific to the discipline				
KK.3	Grammar				
KK.4	Pronunciation / Accent				
KK.5	Fluency / Accuracy / Being hesitant				
KK.6.	Intelligibility / comprehensibility				
KK.7.	Conveying the message				

Others (please specify in details): _____

SECTION-F / LISTENING

16. Do your students ever have to listen to anything in English for your course?

(If no, you may stop here.)

1) yes   2) no

17. To what extent do your students have to listen to each of the following in English for your course? Please answer this question putting a tick (✔) into the space referring to the number relevant to your answer according to the rank order given below:

1) never   2) rarely   3) sometimes   4) usually   5) always

Din.1.	Radio programs in English					
Din.2.	Television programs in English					
Din.3.	Videos / Cinema Films in English					
Din.4.	Words, expressions, statements in English used in the lectures					
Din.5.	Instructions given in English in the lectures					
Din.6.	Debates in English in the lectures					
Din.7.	Daily life conversations					
Din.8.	Seminars in English					
Din.9.	Presentations in English					
Din.10.	Telephone conversations in English					
Din.11.	Telephone messages in English					
Din.12.	Speeches of foreigners studying the same discipline					

Others (please specify in details): _____

APPENDIX C

PART I: Descriptive Statistics on Participants' Responses to Likert-Scale Questions in the Language Skills Sections

Table 1

Descriptive statistics about the responses of the participants to the sub-questions of the 8th question in writing skills section in the questionnaire

	n	m	sd	mv
S1 (writing essays)	177	1.02	0.18	3.00
S2 (writing short answers in exams)	177	1.02	0.21	3.00
S3 (writing presentations)	177	1.03	0.23	3.00
S4 (writing research papers)	177	1.06	0.42	4.00
S5 (taking notes in the class)	177	1.03	0.21	3.00
S6 (writing notes)	177	1.01	0.16	3.00
S7 (writing compositions)	177	1.01	0.16	3.00
S8 (writing projects)	177	1.05	0.35	5.00
S9 (writing descriptions of experiments)	177	1.02	0.18	3.00
S10 (writing e-mails)	177	1.05	0.35	4.00
S11 (writing personal letters)	177	1.05	0.33	3.00
S12 (writing memos)	177	1.05	0.31	3.00
S13 (writing faxes)	177	1.04	0.27	3.00
S14 (writing lab reports)	177	1.02	0.18	3.00
S15 (writing diaries)	177	1.00	0.00	2.00
S16 (writing business letters	177	1.06	0.35	4.00

Note: n = Number of participants   m = Mean   sd = Standard Deviation   mv = Max. value
3rd type choice scale (see Methodology) was used to calculate m. and sd.

Table 2

Descriptive statistics about the responses of the participants to the sub-questions of the 9th question in writing skills section in the questionnaire

	n	m	sd	mv
D1 (expressing main idea)	177	1.09	0.48	4.00
D2 (grammatical accuracy)	177	1.06	0.37	4.00
D3 (relevance between ideas and context)	177	1.06	0.36	3.00
D4 (appropriate connection of ideas)	177	1.05	0.30	3.00
D5 (sequence of ideas)	177	1.04	0.27	3.00
D6 adequate idea development)	177	1.05	0.34	4.00
D7 (originality of thoughts)	177	1.07	0.42	4.00
D8 (use of non-academic vocabulary)	177	1.10	0.51	4.00
D9 (use of academic vocabulary)	177	1.12	0.58	4.00
D10 (mechanics)	177	1.06	0.35	4.00

Note: n = Number of participants   m = Mean   sd = Standard Deviation   mv = Max. value
3rd type choice scale (see Methodology) was used to calculate m. and sd.

Table 3

Descriptive statistics about the responses of the participants to the sub-questions of the 11th question in reading skills section in the questionnaire

	n	m	sd	mv
O1 (reading lecture handouts)	177	1.42	0.98	5.00
O2 (reading reference tools)	177	1.51	1.05	5.00
O3 (reading exam papers)	177	1.05	0.26	3.00
O4 (reading on the internet)	177	1.44	1.04	5.00
O5 (reading articles in periodicals)	177	1.36	0.94	5.00
O6 (reading newspapers)	177	1.23	0.73	5.00
O7 (reading articles in professional journals)	177	1.53	1.12	5.00
O8 (reading instruction booklets/manuals)	177	1.39	0.98	5.00
O9 (reading reports)	177	1.27	0.75	5.00
O10 (reading graphs, charts, tables)	177	1.39	0.92	5.00

Note: n = Number of participants   m = Mean   sd = Standard Deviation   mv = Max. value
3rd type choice scale (see Methodology) was used to calculate m. and sd.

Table 4

Descriptive statistics about the responses of the participants to the sub-questions of the 12th question in reading skills section in the questionnaire

	n	m	sd	mv
OO1 (reading for specific information)	177	1.54	1.15	5.00
OO2 (reading for general information)	177	1.49	1.03	5.00
OO3 (reading for the main idea)	177	1.43	1.02	5.00
OO4 (reading for drawing conclusions)	177	1.45	1.06	5.00
OO5 (reading to understand logical relations in the text)	177	1.41	1.00	5.00
OO6 (reading to understand the writer's attitude)	177	1.28	0.79	5.00
OO7 (reading to scan for unknown vocabulary in general)	177	1.38	0.92	5.00
OO8 (reading for terminology)	177	1.45	1.04	5.00
OO9 (reading to make inferences)	177	1.38	0.98	5.00

Note: n = Number of participants   m = Mean   sd = Standard Deviation   mv = Max. value
3rd type choice scale (see Methodology) was used to calculate m. and sd.

Table 5

Descriptive statistics about the responses of the participants to the sub-questions of the 14th question in speaking skills section in the questionnaire

	n	m	sd	mv
K1 (speaking in classroom discussions)	177	1.05	0.25	3.00
K2 (asking questions orally in class)	177	1.03	0.23	3.00
K3 (presenting oral reports)	177	1.02	0.22	3.00
K4 (speaking at seminars)	177	1.04	0.27	3.00
K5 (speaking on the phone)	177	1.02	0.19	3.00
K6 (speaking in informal situations)	177	1.02	0.14	2.00

Note: n = Number of participants   m = Mean   sd = Standard Deviation   mv = Max. value
3rd type choice scale (see Methodology) was used to calculate m. and sd.

Table 6

Descriptive statistics about the responses of the participants to the sub-questions of the 15th question in speaking skills section in the questionnaire

	n	m	sd	mv
KK1 (non-academic vocabulary)	177	1.07	0.38	4.00
KK2 (academic vocabulary)	177	1.08	0.43	4.00
KK3 (grammar)	177	1.05	0.36	4.00
KK4 (pronunciation / accent)	177	1.06	0.35	4.00
KK5 (fluency / accuracy / being hesitant)	177	1.05	0.36	4.00
KK6 (intelligibility / comprehensibility)	177	1.06	0.35	4.00
KK7 (conveying the message)	177	1.07	0.39	4.00

Note: n = Number of participants   m = Mean   sd = Standard Deviation   mv = Max. value
3rd type choice scale (see Methodology) was used to calculate m. and sd.

Table 7

Descriptive statistics about the responses of the participants to the listening questions in the questionnaire

	n	m	sd	mv
DIN1 (Listening to radio programs)	177	1.07	0.30	3.00
DIN2 (Listening to TV programs)	177	1.07	0.39	4.00
DIN3 (Listening to videos / cinema films)	177	1.06	0.33	4.00
DIN4 (Listening to words and expressions in lectures)	177	1.15	0.65	5.00
DIN5 (Listening to instructions in the lectures)	177	1.07	0.44	5.00
DIN6 (Listening to debates in lectures)	177	1.06	0.44	5.00
DIN7 (Listening to daily life conversations)	177	1.06	0.38	5.00
DIN8 (Listening to seminars)	177	1.05	0.28	3.00
DIN9 (Listening to presentations)	177	1.04	0.27	3.00
DIN10 (Listening to telephone conversations)	177	1.04	0.31	4.00
DIN11 (Listening to telephone messages)	177	1.05	0.32	4.00
DIN12 (Listening to speeches of foreigners of the same discipline)	177	1.08	0.46	5.00

Note: n = Number of participants   m = Mean   sd = Standard Deviation   mv = Max. value
3rd type choice scale (see Methodology) was used to calculate m. and sd.

APPENDIX D

Results of Data Analysis in Full

Table 1

Comparison of Teachers' Writing Requirements in terms of School Classification

Item		n	m	sd	t	p
S1	Faculty	102	1.02	0.22	0.57	0.56
	Vocational school	75	1.01	0.11		
S2	Faculty	102	1.01	0.19	0.21	0.82
	Vocational school	75	1.02	0.23		
S3	Faculty	102	1.03	0.24	0.34	0.72
	Vocational school	75	1.02	0.23		
S4	Faculty	102	1.08	0.46	0.75	0.45
	Vocational school	75	1.04	0.34		
S5	Faculty	102	1.00	0.10	1.78	0.76
	Vocational school	75	1.06	0.30		
S6	Faculty	102	1.00	0.10	0.66	0.51
	Vocational school	75	1.02	0.23		
S7	Faculty	102	1.00	0.10	0.66	0.51
	Vocational school	75	1.02	0.23		
S8	Faculty	102	1.04	0.25	0.79	0.93
	Vocational school	75	1.05	0.46		
S9	Faculty	102	1.02	0.22	0.57	0.56
	Vocational school	75	1.01	0.11		
S10	Faculty	102	1.05	0.36	0.34	0.73
	Vocational school	75	1.04	0.34		
S11	Faculty	102	1.07	0.39	1.02	0.30
	Vocational school	75	1.02	0.23		
S12	Faculty	102	1.06	0.35	0.59	0.55
	Vocational school	75	1.04	0.25		
S13	Faculty	102	1.06	0.35	1.30	0.19
	Vocational school	75	1.01	0.11		

		n	m	sd	t	p
S14	Faculty	102	1.02	0.22	0.57	0.56
	Vocational school	75	1.01	0.11		
S15	Faculty	102	1.00	0.10	0.85	0.39
	Vocational school	75	1.00	0.00		
S16	Faculty	102	1.07	0.36	0.70	0.48
	Vocational school	75	1.04	0.34		
D1	Faculty	102	1.05	0.36	1.02	0.30
	Vocational school	75	1.13	0.60		
D2	Faculty	102	1.04	0.29	0.76	0.44
	Vocational school	75	1.09	0.47		
D3	Faculty	102	1.07	0.39	0.45	0.65
	Vocational school	75	1.05	0.32		
D4	Faculty	102	1.04	0.29	0.09	0.92
	Vocational school	75	1.05	0.32		
D5	Faculty	102	1.03	0.24	0.33	0.74
	Vocational school	75	1.05	0.32		
D6	Faculty	102	1.04	0.29	0.33	0.74
	Vocational school	75	1.06	0.41		
D7	Faculty	102	1.04	0.32	0.88	0.37
	Vocational school	75	1.10	0.53		
D8	Faculty	102	1.06	0.40	1.00	0.31
	Vocational school	75	1.14	0.63		
D9	Faculty	102	1.10	0.50	0.58	0.55
	Vocational school	75	1.16	0.67		
D10	Faculty	102	1.04	0.29	0.57	0.56
	Vocational school	75	1.08	0.42		

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results

Table 2

Comparison of Teachers' Speaking Requirements in terms of School Classification

Item		n	m	sd	t	p
K1	Faculty	102	1.02	0.22	1.65	0.09
	Vocational school	75	1.09	0.29		
K2	Faculty	102	1.04	0.29	0.99	0.32
	Vocational school	75	1.01	0.11		
K3	Faculty	102	1.03	0.27	0.75	0.45
	Vocational school	75	1.01	0.11		
K4	Faculty	102	1.04	0.29	0.21	0.83
	Vocational school	75	1.04	0.25		
K5	Faculty	102	1.01	0.13	0.67	0.49
	Vocational school	75	1.04	0.25		
K6	Faculty	102	1.02	0.16	0.70	0.48
	Vocational school	75	1.01	0.11		
KK1	Faculty	102	1.08	0.44	0.59	0.55
	Vocational school	75	1.05	0.27		
KK2	Faculty	102	1.09	0.49	0.47	0.63
	Vocational school	75	1.06	0.34		
KK3	Faculty	102	1.07	0.46	0.93	0.35
	Vocational school	75	1.02	0.16		
KK4	Faculty	102	1.06	0.40	0.28	0.77
	Vocational school	75	1.05	0.27		
KK5	Faculty	102	1.07	0.46	0.93	0.35
	Vocational school	75	1.02	0.16		
KK6	Faculty	102	1.08	0.44	1.13	0.25
	Vocational school	75	1.02	0.16		
KK7	Faculty	102	1.09	0.49	0.95	0.34
	Vocational school	75	1.04	0.19		

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results

Table 3

Comparison of Teachers' Listening Requirements in terms of School Classification

Item		n	m	sd	t	p
Din1	Faculty	102	1.05	0.30	1.01	0.31
	Vocational school	75	1.10	0.31		
Din2	Faculty	102	1.06	0.37	0.18	0.85
	Vocational school	75	1.08	0.42		
Din3	Faculty	102	1.05	0.30	0.15	0.88
	Vocational school	75	1.06	0.37		
Din4	Faculty	102	1.15	0.67	0.10	0.91
	Vocational school	75	1.14	0.63		
Din5	Faculty	102	1.10	0.54	1.00	0.31
	Vocational school	75	1.04	0.25		
Din6	Faculty	102	1.10	0.57	1.39	0.16
	Vocational school	75	1.01	0.11		
Din7	Faculty	102	1.08	0.48	1.04	0.29
	Vocational school	75	1.02	0.16		
Din8	Faculty	102	1.06	0.32	0.95	0.33
	Vocational school	75	1.02	0.23		
Din9	Faculty	102	1.05	0.30	0.75	0.44
	Vocational school	75	1.02	0.23		
Din10	Faculty	102	1.05	0.36	0.66	0.50
	Vocational school	75	1.02	0.23		
Din11	Faculty	102	1.05	0.36	0.38	0.70
	Vocational school	75	1.04	0.25		
Din12	Faculty	102	1.10	0.54	0.77	0.44
	Vocational school	75	1.05	0.32		

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results

Table 4
<u>Comparison of Writing Requirements of Teachers with or without Ph.D.s</u>

Item		n	m	sd	t	p
S1	Without Ph.D.s	113	1.00	0.10	1.32	0.18
	With Ph.D.s	64	1.04	0.27		
S2	Without Ph.D.s	113	1.01	0.18	0.40	0.68
	With Ph.D.s	64	1.03	0.25		
S3	Without Ph.D.s	113	1.00	0.00	2.58	0.01**
	With Ph.D.s	64	1.09	0.38		
S4	Without Ph.D.s	113	1.00	0.00	2.90	0.00**
	With Ph.D.s	64	1.18	0.68		
S5	Without Ph.D.s	113	1.03	0.22	0.12	0.90
	With Ph.D.s	64	1.03	0.17		
S6	Without Ph.D.s	113	1.00	0.00	1.79	0.74
	With Ph.D.s	64	1.04	0.27		
S7	Without Ph.D.s	113	1.00	0.00	1.79	0.74
	With Ph.D.s	64	1.04	0.27		
S8	Without Ph.D.s	113	1.00	0.00	2.55	0.01**
	With Ph.D.s	64	1.14	0.58		
S9	Without Ph.D.s	113	1.00	0.00	2.20	0.02*
	With Ph.D.s	64	1.06	0.30		
S10	Without Ph.D.s	113	1.00	0.00	2.55	0.01**
	With Ph.D.s	64	1.14	0.58		
S11	Without Ph.D.s	113	1.00	0.00	3.07	0.00**
	With Ph.D.s	64	1.15	0.54		
S12	Without Ph.D.s	113	1.01	0.18	2.20	0.02*
	With Ph.D.s	64	1.12	0.45		
S13	Without Ph.D.s	113	1.00	0.00	2.93	0.00**
	With Ph.D.s	64	1.12	0.45		
S14	Without Ph.D.s	113	1.00	0.10	1.32	0.18
	With Ph.D.s	64	1.04	0.27		
S15	Without Ph.D.s	113	1.00	0.00	1.33	0.18
	With Ph.D.s	64	1.01	0.12		
S16	Without Ph.D.s	113	1.00	0.00	3.16	0.00**
	With Ph.D.s	64	1.17	0.57		
D1	Without Ph.D.s	113	1.06	0.40	1.04	0.29
	With Ph.D.s	64	1.14	0.58		
D2	Without Ph.D.s	113	1.03	0.26	1.52	0.13
	With Ph.D.s	64	1.12	0.51		
D3	Without Ph.D.s	113	1.01	0.18	2.47	0.01**
	With Ph.D.s	64	1.15	0.54		
D4	Without Ph.D.s	113	1.01	0.18	1.92	0.05
	With Ph.D.s	64	1.10	0.44		
D5	Without Ph.D.s	113	1.01	0.18	1.75	0.08
	With Ph.D.s	64	1.09	0.38		
D6	Without Ph.D.s	113	1.01	0.18	1.98	0.04*
	With Ph.D.s	64	1.12	0.51		

		n	m	sd	t	p
D7	Without Ph.D.s	113	1.04	0.33	1.21	0.22
	With Ph.D.s	64	1.12	0.54		
D8	Without Ph.D.s	113	1.07	0.43	1.06	0.28
	With Ph.D.s	64	1.15	0.62		
D9	Without Ph.D.s	113	1.07	0.48	1.52	0.12
	With Ph.D.s	64	1.21	0.72		
D10	Without Ph.D.s	113	1.02	0.20	1.77	0.07
	With Ph.D.s	64	1.12	0.51		

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results

Table 5

Comparison of Speaking Requirements of Teachers with or without Ph.D.s

Item		n	m	sd	t	p
K1	Without Ph.D.s	113	1.06	0.24	0.37	0.70
	With Ph.D.s	64	1.04	0.27		
K2	Without Ph.D.s	113	1.00	0.10	1.89	0.06
	With Ph.D.s	64	1.07	0.36		
K3	Without Ph.D.s	113	1.00	0.10	1.53	0.12
	With Ph.D.s	64	1.06	0.35		
K4	Without Ph.D.s	113	1.00	0.10	2.33	0.02*
	With Ph.D.s	64	1.10	0.44		
K5	Without Ph.D.s	113	1.00	0.10	1.74	0.08
	With Ph.D.s	64	1.06	0.30		
K6	Without Ph.D.s	113	1.00	0.10	1.63	0.10
	With Ph.D.s	64	1.04	0.21		
KK1	Without Ph.D.s	113	1.01	0.13	2.60	0.10
	With Ph.D.s	64	1.17	0.60		
KK2	Without Ph.D.s	113	1.02	0.20	2.38	0.01**
	With Ph.D.s	64	1.18	0.66		
KK3	Without Ph.D.s	113	1.00	0.10	2.33	0.02*
	With Ph.D.s	64	1.14	0.58		
KK4	Without Ph.D.s	113	1.02	0.20	1.77	0.07
	With Ph.D.s	64	1.12	0.51		
KK5	Without Ph.D.s	113	1.01	0.13	1.89	0.06
	With Ph.D.s	64	1.12	0.57		
KK6	Without Ph.D.s	113	1.01	0.13	2.23	0.02*
	With Ph.D.s	64	1.14	0.55		
KK7	Without Ph.D.s	113	1.01	0.13	2.50	0.01**
	With Ph.D.s	64	1.17	0.63		

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results

Table 6
Comparison of Writing Requirements of Teachers in accordance with Science
Classification

			n	m	sd	f	p	Mean Difference
S1	1	SP	59	1.00	0.00	2.77	0.04	
	2	SA	35	1.02	0.16			
	3	HP	27	1.11	0.42			
	4	HA	56	1.00	0.00			
S2	1	SP	59	1.00	0.00	1.28	0.28	
	2	SA	35	1.05	0.33			
	3	HP	27	1.07	0.38			
	4	HA	56	1.00	0.00			
S3	1	SP	59	1.03	0.26	1.36	0.25	
	2	SA	35	1.02	0.16			
	3	HP	27	1.11	0.42			
	4	HA	56	1.00	0.00			
S4	1	SP	59	1.08	0.46	1.85	0.13	
	2	SA	35	1.02	0.16			
	3	HP	27	1.22	0.80			
	4	HA	56	1.00	0.00			
S5	1	SP	59	1.01	0.13	0.94	0.42	
	2	SA	35	1.08	0.37			
	3	HP	27	1.03	0.19			
	4	HA	56	1.01	0.13			
S6	1	SP	59	1.03	0.26	0.63	0.59	
	2	SA	35	1.00	0.00			
	3	HP	27	1.03	0.19			
	4	HA	56	1.00	0.00			
S7	1	SP	59	1.03	0.26	0.63	0.59	
	2	SA	35	1.00	0.00			
	3	HP	27	1.03	0.19			
	4	HA	56	1.00	0.00			
S8	1	SP	59	1.08	0.53	0.85	0.46	
	2	SA	35	1.02	0.16			
	3	HP	27	1.11	0.42			
	4	HA	56	1.00	0.00			
S9	1	SP	59	1.01	0.13	2.65	0.05	
	2	SA	35	1.00	0.00			
	3	HP	27	1.11	0.42			
	4	HA	56	1.00	0.00			
S10	1	SP	59	1.05	0.39	1.04	0.37	
	2	SA	35	1.05	0.33			
	3	HP	27	1.14	0.60			
	4	HA	56	1.00	0.00			

S11	1	SP	59	1.06	0.36	1.25	0.29
	2	SA	35	1.05	0.33		
	3	HP	27	1.14	0.53		
	4	HA	56	1.00	0.00		
S12	1	SP	59	1.05	0.28	1.27	0.28
	2	SA	35	1.11	0.47		
	3	HP	27	1.11	0.42		
	4	HA	56	1.00	0.00		
S13	1	SP	59	1.05	0.28	1.02	0.38
	2	SA	35	1.05	0.33		
	3	HP	27	1.11	0.42		
	4	HA	56	1.00	0.00		
S14	1	SP	59	1.01	0.13	0.91	0.43
	2	SA	35	1.00	0.00		
	3	HP	27	1.07	0.38		
	4	HA	56	1.01	0.13		
S15	1	SP	59	1.00	0.00	1.88	0.13
	2	SA	35	1.00	0.00		
	3	HP	27	1.03	0.19		
	4	HA	56	1.00	0.00		
S16	1	SP	59	1.11	0.49	1.02	0.36
	2	SA	35	1.05	0.33		
	3	HP	27	1.07	0.38		
	4	HA	56	1.00	0.00		
D1	1	SP	59	1.05	0.39	2.01	0.11
	2	SA	35	1.25	0.85		
	3	HP	27	1.11	0.42		
	4	HA	56	1.01	0.13		
D2	1	SP	59	1.05	0.39	1.65	0.18
	2	SA	35	1.17	0.56		
	3	HP	27	1.11	0.42		
	4	HA	56	1.00	0.00		
D3	1	SP	59	1.06	0.36	1.29	0.27
	2	SA	35	1.11	0.47		
	3	HP	27	1.14	0.53		
	4	HA	56	1.00	0.00		
D4	1	SP	59	1.03	0.26	1.43	0.23
	2	SA	35	1.11	0.47		
	3	HP	27	1.11	0.42		
	4	HA	56	1.00	0.00		
D5	1	SP	59	1.03	0.26	1.34	0.26
	2	SA	35	1.11	0.47		
	3	HP	27	1.07	0.26		
	4	HA	56	1.00	0.00		

			n	m	sd	t	p		
D6	1	SP	59	1.05	0.39	1.03	0.37		
	2	SA	35	1.11	0.47				
	3	HP	27	1.11	0.42				
	4	HA	56	1.00	0.00				
D7	1	SP	59	1.05	0.39	2.19	0.09		
	2	SA	35	1.22	0.77				
	3	HP	27	1.07	0.26				
	4	HA	56	1.00	0.00				
D8	1	SP	59	1.05	0.39	1.47	0.22		
	2	SA	35	1.22	0.77				
	3	HP	27	1.18	0.68				
	4	HA	56	1.03	0.26				
D9	1	SP	59	1.11	0.55	0.73	0.53		
	2	SA	35	1.22	0.77				
	3	HP	27	1.18	0.68				
	4	HA	56	1.05	0.40				
D10	1	SP	59	1.05	0.39	1.36	0.25		
	2	SA	35	1.14	0.49				
	3	HP	27	1.11	0.42				
	4	HA	56	1.00	0.00				

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results   f = variance

Table 7

Comparison of Reading Requirements of Teachers in accordance with Science

Classification

			n	m	sd	f	p	Mean Difference
O1	1	SP	59	1.25	0.86	1.20	0.30	
	2	SA	35	1.48	1.14			
	3	HP	27	1.6	1.03			
	4	HA	56	1.46	1.97			
02	1	SP	59	1.25	0.70	4.22	0.00	1-3
	2	SA	35	1.40	0.94			
	3	HP	27	1.07	1.46			
	4	HA	56	1.60	1.10			
03	1	SP	59	1.03	0.26	0.33	0.80	
	2	SA	35	1.02	0.16			
	3	HP	27	1.07	0.26			
	4	HA	56	1.07	0.32			
04	1	SP	59	1.27	0.92	1.32	0.26	
	2	SA	35	1.34	0.87			
	3	HP	27	1.55	1.01			
	4	HA	56	1.62	1.24			
05	1	SP	59	1.25	0.88	0.64	0.58	
	2	SA	35	1.31	0.83			
	3	HP	27	1.48	1.12			
	4	HA	56	1.46	0.99			
O6	1	SP	59	1.16	0.64	0.45	0.71	
	2	SA	35	1.20	0.58			
	3	HP	27	1.25	0.71			
	4	HA	56	1.32	0.89			
O7	1	SP	59	1.25	0.86	4.05	0.00	1-3
	2	SA	35	1.37	0.91			
	3	HP	27	1.07	1.32			
	4	HA	56	1.67	1.28			
O8	1	SP	59	1.22	0.78	2.76	0.04	
	2	SA	35	1.34	0.93			
	3	HP	27	1.22	0.57			
	4	HA	56	1.69	1.26			
O9	1	SP	59	1.18	0.62	0.91	0.43	
	2	SA	35	1.22	0.73			
	3	HP	27	1.25	0.59			
	4	HA	56	1.41	0.94			

			n	m	sd	t	p
O10	1	SP	59	1.18	0.73	2.80	0.04
	2	SA	35	1.25	0.70		
	3	HP	27	1.66	1.03		
	4	HA	56	1.57	1.10		
OO1	1	SP	59	1.28	0.89	1.57	0.19
	2	SA	35	1.60	1.26		
	3	HP	27	1.77	1.28		
	4	HA	56	1.66	1.23		
OO2	1	SP	59	1.23	0.81	2.43	0.06
	2	SA	35	1.51	1.09		
	3	HP	27	1.85	1.32		
	4	HA	56	1.57	1.02		
OO3	1	SP	59	1.27	0.80	0.82	0.48
	2	SA	35	1.45	1.09		
	3	HP	27	1.51	1.15		
	4	HA	56	1.55	1.11		
OO4	1	SP	59	1.20	0.68	1.73	0.16
	2	SA	35	1.51	1.17		
	3	HP	27	1.66	1.30		
	4	HA	56	1.57	1.17		
OO5	1	SP	59	1.20	0.68	1.34	0.26
	2	SA	35	1.54	1.24		
	3	HP	27	1.51	1.05		
	4	HA	56	1.51	1.09		
OO6	1	SP	59	1.16	0.56	0.69	0.55
	2	SA	35	1.34	0.96		
	3	HP	27	1.40	1.00		
	4	HA	56	1.30	0.78		
OO7	1	SP	59	1.27	0.82	0.93	0.42
	2	SA	35	1.40	1.00		
	3	HP	27	1.62	1.04		
	4	HA	56	1.39	0.90		
OO8	1	SP	59	1.27	0.88	1.61	0.18
	2	SA	35	1.40	1.00		
	3	HP	27	1.77	1.25		
	4	HA	56	1.53	1.11		
OO9	1	SP	59	1.23	0.81	0.65	0.58
	2	SA	35	1.45	1.09		
	3	HP	27	1.44	1.01		
	4	HA	56	1.46	1.07		

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results   f = variance

Table 8

Comparison of Speaking Requirements of Teachers in accordance with Science

Classification

			n	m	sd	f	p	Mean Difference
K1	1	SP	59	1.00	0.00	8.11	0.00	1-3
	2	SA	35	1.00	0.00			2-3
	3	HP	27	1.25	0.44			3-4
	4	HA	56	1.05	0.29			
K2	1	SP	59	1.03	0.26	0.36	0.77	
	2	SA	35	1.00	0.00			
	3	HP	27	1.03	0.19			
	4	HA	56	1.05	0.29			
K3	1	SP	59	1.00	0.00	1.11	0.34	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.05	0.29			
K4	1	SP	59	1.05	0.28	0.42	0.73	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.05	0.29			
K5	1	SP	59	1.03	0.26	0.29	0.82	
	2	SA	35	1.00	0.00			
	3	HP	27	1.03	0.19			
	4	HA	56	1.03	0.18			
K6	1	SP	59	1.01	0.13	0.52	0.66	
	2	SA	35	1.00	0.00			
	3	HP	27	1.03	0.19			
	4	HA	56	1.03	0.18			
KK1	1	SP	59	1.08	0.38	0.07	0.97	
	2	SA	35	1.08	0.50			
	3	HP	27	1.07	0.38			
	4	HA	56	1.05	0.29			
KK2	1	SP	59	1.10	0.48	0.62	0.59	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.12	0.54			
KK3	1	SP	59	1.08	0.42	0.41	0.74	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.05	0.40			

			n	m	sd	t	p			
KK4	1	SP	59	1.06	0.31	0.47	0.70			
	2	SA	35	1.00	0.00					
	3	HP	27	1.07	0.38					
	4	HA	56	1.08	0.47					
KK5	1	SP	59	1.06	0.40	0.34	0.79			
	2	SA	35	1.00	0.00					
	3	HP	27	1.07	0.38					
	4	HA	56	1.07	0.42					
KK6	1	SP	59	1.05	0.28	0.04	0.98			
	2	SA	35	1.05	0.33					
	3	HP	27	1.07	0.38					
	4	HA	56	1.07	0.42					
KK7	1	SP	59	1.08	0.42	0.03	0.99			
	2	SA	35	1.05	0.33					
	3	HP	27	1.07	0.38					
	4	HA	56	1.07	0.42					

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results   f = variance

Table 9

Comparison of Listening Requirements of Teachers in accordance with Science

Classification

			n	m	sd	f	p	Mean Difference
Din1	1	SP	59	1.03	0.18	6.10	0.00	1-3
	2	SA	35	1.00	0.00			2-3
	3	HP	27	1.29	0.54			3-4
	4	HA	56	1.07	0.32			
DIN2	1	SP	59	1.03	0.18	1.23	0.29	
	2	SA	35	1.00	0.00			
	3	HP	27	1.11	0.57			
	4	HA	56	1.14	0.55			
DIN3	1	SP	59	1.03	0.18	1.18	0.31	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.12	0.50			
DIN4	1	SP	59	1.05	0.28	3.46	0.01	
	2	SA	35	1.00	0.00			
	3	HP	27	1.11	0.57			
	4	HA	56	1.37	1.01			
DIN5	1	SP	59	1.03	0.18	1.51	0.21	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.17	0.71			
DIN6	1	SP	59	1.01	0.13	1.13	0.33	
	2	SA	35	1.00	0.00			
	3	HP	27	1.11	0.57			
	4	HA	56	1.14	0.67			
DIN7	1	SP	59	1.03	0.18	0.90	0.43	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.12	0.60			
DIN8	1	SP	59	1.05	0.28	0.51	0.67	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.07	0.32			
DIN9	1	SP	59	1.05	0.28	0.42	0.73	
	2	SA	35	1.00	0.00			
	3	HP	27	1.07	0.38			
	4	HA	56	1.05	0.29			

			n	m	sd	t	p	
DIN10	1	SP	59	1.05	0.28	0.64	0.58	
	2	SA	35	1.00	0.00			
	3	HP	27	1.11	0.57			
	4	HA	56	1.03	0.26			
DIN11	1	SP	59	1.05	0.28	0.59	0.62	
	2	SA	35	1.00	0.00			
	3	HP	27	1.11	0.57			
	4	HA	56	1.05	0.29			
DIN12	1	SP	59	1.05	0.28	1.02	0.38	
	2	SA	35	1.00	0.00			
	3	HP	27	1.11	0.57			
	4	HA	56	1.16	0.65			

Note. n = Number of participants   m = mean   sd = Standard deviation
p = significance   t = t-test results   f = variance