ENGLISH-MEDIUM EDUCATION IN TURKEY
A MYTH OR AN ACHIEVABLE GOAL?

AN EVALUATION OF CONTENT-BASED SECOND LANGUAGE INSTRUCTION AT THE MIDDLE EAST TECHNICAL UNIVERSITY

by

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ABSTRACT

This study is aimed at examining and discussing evidence for and against the effectiveness of content-based second language instruction at university level in Turkey. It deals with the following central questions: Is the integration of content and language teaching the best way to develop students' English language proficiency? Is it really working in Turkey? How does English-medium education affect students' content learning?

The first three chapters of this study set out the problematics of the content-based second language instruction (CBSLI) with reference to Turkey. Chapter one is concerned with the theoretical underpinning of CBSLI. The focus of attention in Chapter two is on French immersion programmes in Canada because of their significant contribution to the spread of immersion programmes to various other countries. Studies of immersion programmes in the Philippines and Tanzania are also taken into consideration in so far as they help assess the transferability of Canadian experiments to other countries in very different socio-cultural and economic circumstances.

Chapter three discusses the implementation of CBSLI in the specific context of Turkey. Special attention is paid to the choice of the language of instruction. Arguments for English-medium education and Turkish-medium education are examined.

The last three chapters are concerned with factual evidence relating to the efficiency of CBSLI in Turkey. Chapter four presents the research design and methodology, working hypotheses and rationale for the study. Chapter five analyses the data obtained from students and teachers' questionnaires under the following three headings: 1) English language and study skill, 2) Academic performance, 3) Attitudinal considerations. Chapter six focuses on CBSLI classroom interaction in METU and assesses the extent to which CBSLI principles are being implemented in real classroom situations: whether CBSLI classrooms provide opportunities for the kind of input, interaction and output in the second language which have been deemed essential to promote second language acquisition.

The overall conclusion of the present study is that content-based second language instruction lacks theoretical and empirical support in the context of Turkey. Our findings show that the integration of content and language teaching under existing conditions does not provide the most favourable environment either for second language learning or content learning. There seems to be a case for the use of Turkish as the medium of instruction and for intensive tuition in English as a second language.

ACKNOWLEDGEMENTS

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Proponents of content-based second language instruction (thereafter CBSLI) claim that a foreign language is more effectively learned when it is the medium of content-based instruction than when content and language skills are taught separately. It is assumed that accessing hard knowledge through a second language re-mobilizes cognitive strategies developed in first language acquisition, and that as long as a sufficient amount of comprehensible input in the target language is provided, the conditions for successful language learning are met (Krashen 1985).

Several theoretical rationales underpin this approach which apparently contrasts with many existing methods where content and language skills are taught separately. A widely accepted argument for integrating language and content teaching is that "language is learned most effectively for communication in meaningful, purposeful, social and academic contexts" (Snow et al. 1989:202).

Mohan (1986) also argues that language teaching should not be isolated from substantive content. He claims that

> Helping students use language to learn requires us to look beyond the language domain to all subject areas and to look beyond language learning to education in general. Outside the isolated language classroom students learn language and content at the same time. Therefore, we need a broad perspective which integrates language and content learning (1986:18).

Another underlying rationale for providing instruction in a language different from that which students normally use is that language learning in CBSLI provides a motivational basis for language learning. Because in content teaching attention is focused on the subject-matter covered, which is supposed to be relevant to the interests of students, the language is learned as a means of accessing the message rather than for its own sake.

Therefore, as Snow et al. argue, "language learning may even become incidental to learning about the context (e.g. in immersion classes)" (1989:202). Nevertheless, it should be pointed out that the motivational argument for CBSLI is only valid in situations where students are able to understand the material and hence find it relevant to their own interests.

The strongest argument for CBSLI has been formulated by Krashen (1982) who argues that content-based courses meet the necessary conditions of successful second language acquisition: a sufficient amount of comprehensible input in the target language and a low affective filter on the part of acquirers. He claims that by the rich context of the subject matter which contains the new elements to be acquired and also by the inherent relevance of the content, students will be able to focus on the messages and not on language forms. Thus, the affective filter, in other words, anxiety or mental blocks caused by formal language teaching will be lowered thereby enhancing the chances for acquisition to occur.

However, Krashen's second language acquisition theory exhibits several profound weaknesses. It appears that although his theory has gained considerable popularity among second language researchers, his claims are not supported by empirical evidence. He has recently been criticised for overemphasising the role of comprehensible input in second language acquisition. It is argued that comprehensible output is as important as comprehensible input for successful second language acquisition to occur (Swain 1985).

On the other hand, in the last twenty years second or foreign language acquisition through immersion, which is described as the most highly developed form of content-based second language instruction (CBSLI), has received considerable attention mostly because of the supporting evidence produced by French immersion programmes in Canada. Numerous studies (See J. Cummins and M. Swain 1986; M. Swain and S. Lapkin 1982) have shown that students on such programmes make dramatic progress in

second language proficiency while learning other subjects at no expense to their control of the native language. However, there are also studies which question the validity of the claims by CBSLI advocates as far as the linguistic competence of students in French immersion programmes is concerned. For instance Pawley's study (1985) shows that the level of language proficiency reached by students by the eleventh grade is low considering the amount of instructional time involved. Spilka (1976) observes no apparent progress in the area of grammaticality with immersion students between grade one and grade six. And more recently, advocates of the immersion approach have acknowledged the fact that "not all content teaching is necessarily good language teaching" (Swain 1988:69).

Despite such ambiguous and conflicting views, a number of special immersion programmes have been developed in various countries like Tanzania, the Philippines, Nigeria and Turkey.

In recent years, the question as to how second language teaching and instruction in other subjects can be integrated into one programme has become a matter of concern among educators, authorities as well as students and parents in Turkey. In this debate, some have emphasized the pedagogic effectiveness of CBSLI on the basis of the positive results accruing from French immersion programmes in the late 1960s. In a search for an alternative method to traditional language teaching methods, all of which being regarded as unsuccessful, they have come to view CBSLI as the best way of teaching a foreign language. Advocates of this approach have also stressed that ESL content instruction would offer socio-economic advantages by way of individual promotion, enhanced educational and employment opportunities while facilitating the transfer of science and technology from the West, such transfer being considered as the only way to catch up with developed countries.

On the other hand, opponents of content-based second language learning programmes have claimed that findings from Canadian immersion programmes should not be extrapolated since the pedagogic effectiveness of these programmes is largely dependent on factors such as the relative status of native language and foreign language, the provision of teaching facilities, the availability of bilingual teachers. They argue that unless Canadian-like conditions are met in Turkey, immersion programmes are not likely to produce the desired effects. Moreover, opponents of this approach have warned of the danger of imposing a foreign language as the medium of instruction because such a policy would jeopardize national identity with the spread of English and "Western imperialism", and undermine equal opportunity in education.

To what extent have Turkish authorities taken into consideration arguments for and against CBSLI? This study is intended to describe and evaluate the nature of the language teaching policy in Turkey and at the same time to contribute to the current debate on the merits of second language learning in content classroom. The objective is twofold. Firstly, to assess the extent to which general theoretical (linguistic and pedagogical) principles behind CBSLI are substantiated by empirical evidence and whether these principles are affected by country-specific cultural, social, political and economic factors.

The second objective is to examine and discuss evidence for and against the effectiveness of CBSLI in promoting command of foreign language at university level in Turkey. Our original motivation in carrying out such an investigation derives from the absence of any empirical research endorsing the efficiency and applicability of CBSLI to the demands and conditions of the Turkish educational system. However, it should be pointed out that this lack of conclusive evidence did not prevent a dramatic increase in the number of English-medium institutions at every level of education from primary to university level in Turkey. And it appears that there are still a number of secondary schools and universities on the waiting list, all implicitly agreeing that replacing Turkish

with English for instructional purposes is the best way to provide their students with a so called "passport" to success in life.

For years and years, a lot of English has been taught in Turkey both as a second language and as a medium of instruction. Yet, teachers throughout the country, particularly those in English-medium institutions, have been complaining about their students' lack of skills in English and their unwillingness to participate in any sort of discussion in the class. Why, then, one may ask, insist on using English as the medium of instruction? Is CBSLI really the best way to teach English? Does it really work?

GENERAL RESEARCH QUESTIONS

The purpose of the present study is to seek data which would address the following issues:

[1] Is the second language learning theory behind CBSLI supported by empirical evidence?

[2] Does the CBSLI classroom contribute to the students' second language development?

[3] Does the CBSLI classroom contribute to students' content learning?

[4] Does the CBSLI classroom environment provide opportunities for the kind of input, interaction and output in the second language which have been claimed essential to promote second language acquisition?

For the purpose of evaluating CBSLI programmes in Turkey, the study relies on two sets of data:

[1] self-evaluation by students and teachers at Middle East Technical University (METU) to assess the effectiveness of CBSLI in the Turkish context from the perspectives of those involved;

[2]   classroom observation to cross check students' and teachers' evaluations with an
       investigation into what actually goes on in a classroom situation.

The first set of data has been collected from two separate questionnaires -one for
teachers and one for students. Students were asked to rate their English proficiency in
four basic skills and in language related academic tasks. They were also asked about their
attitudes to having to learn in a second language. They evaluated their instructors and
CBSLI in general as well.

Teachers' questionnaires gathered data on how teachers rated their English
proficiency, on their opinions of English-medium education and on the problems they
faced when using English as a medium of instruction.

One might argue that standard second language proficiency tests would have yielded
more reliable insights into students' language development than self-assessment ques-
tionnaires. Evaluating learner's progress by means of tests, quizzes and examinations
undoubtedly provide useful feedback to the teacher, to the learner and to the institution.
However, we believe that in order to get adequate information in terms of the learner's
actual performance and progress in the process of language learning and to collect data
on such issues as the quality and effectivenes of a particular course and degrees of com-
munication between students and teachers, a questionnaire is an effective measure. It
involves students and teachers to a much higher degree than any other instrument would.
As Oskarsson (1980:xi) put it, self-evaluation is a particularly important kind of evalua-
tion because "the individual student is brought to an efficient realization of his own
achievement, or lack of it, in relation to the goals he set himself in the first place."

The second set of data came from classroom observations at METU. A two-hour
lesson from each department was observed, taped and transcribed. The purpose was to
investigate what was actually happening and what kind of learning opportunities arose in

the classrooms.

As for the use of classroom observation as a data collection technique, we believe that it is an indispensable tool to determine to what extent the theory of language teaching is put into practice in classroom settings. Going into the classroom is the only way to observe what is really happening and how the language development is being brought about.

OUTLINE OF THE STUDY

The study is divided into six chapters.

Chapter one presents CBSLI from a historico-theoretical perspective in order to bring out the factors which set the stage for the emergence of CBSLI as an important trend in second language teaching. The Communicative language teaching theories which have been ostensibly linked with CBSLI together with a short review of the past few decades in language teaching which led to the development of the content-based approach will be useful to our understanding of the theoretical base of CBSLI.

The study moves on to a detailed examination of different experimentations with CBSLI in a number of countries along with their second language and academic results. The main focus of attention is on French immersion programmes in Canada because of their significant contribution to the spread of immersion programmes to various other countries. Studies of immersion programmes in the Philippines and Tanzania are also taken into consideration in so far as they help assess the transferability of Canadian experiments to other countries in very different socio-cultural and economic circumstances. By contrasting and comparing different national experiences, one may gauge the extent to which the integrative approach owes its effectiveness to specific contextual configurations. What remains to be seen is whether in the given context of present-day Turkey, it is more or less effective in achieving command of both foreign language and

subject matter than the traditional juxtaposition of foreign language teaching and subject matter instruction in the native language.

After examining different national experiences, Chapter three moves on to the Turkish scene. Special attention is paid to the part played by educational institutions as well as by socioeconomic and cultural characteristics and demands in shaping both language policies and the development of CBSLI in Turkey. The validity of the arguments for English-medium education is discussed and found wanting.

With this overview of the theoretical and practical issues behind the transfer of the North American immersion model to the very different socio-cultural context of Turkey, the stage is set for the empirical part of the study. Chapter four presents the research design, working hypotheses and rationale for the study. The investigative methods as well as the setting and subjects of the study are dealt with in this chapter.

In order to find empirical evidence as to whether CBSLI programmes are effective in promoting second language skills at university level in the context of present-day Turkey, Chapter five is devoted to a survey carried out in four departments in four faculties in the Middle East Technical University (METU): the Department of Architecture in the Faculty of Architecture, the Department of Sociology in the Faculty of Arts and Sciences, the Department of Economics in the Faculty of Economic and Administrative Sciences and the Department of Chemical Engineering in the Faculty of Engineering. The population surveyed numbers 186 second-year students and 41 instructors.

The data obtained from students and teachers' questionnaires are analysed under the following three headings: 1) English language and study skills, 2) Academic performance, 3) Attitudinal considerations.

Chapter six focuses on CBSLI classrooms at METU in order to find out what extent

CBSLI principles are being implemented in real classroom situations. Our textual analysis of classroom interaction obtained from lesson transcriptions is guided by three current theoretical perspectives on the nature of second language learning.

The first one is based on comprehensible input hypothesis and analyzes the language used in the classroom by teachers according to

a) the amount of teacher talk,

b) the quality of teacher talk,

c) the language of input: L1 or L2?

In addition to examining the nature of the input provided by the teacher, we looked at interaction between teachers and students since it is claimed that comprehensibility of input is facilitated by participation and negotiation of meaning. Thus the following three aspects of interaction are examined:

a) teachers' questioning style,

b) students' participation in interaction,

c) negotiation of meaning.

The third one is based on the comprehensible output theory which claims that students should be given opportunities to produce the target language in order to develop their second language. We focused on

a) negotiation of meaning,

b) feedback on students' errors.

The last section will address the theoretical and practical issues covered throughout the study under two headings: the theoretical and the empirical considerations; and an alternative to the use of English as a medium of instruction in the Turkish educational system will be presented.

Conducting such an investigation has made us acutely aware of the issues involved. Language policies for education are multifaceted and highly political issues. They are not taken on educational grounds alone. There are economic (the distribution of economic resources) political (the protection of existing power structures) and sociocultural dimensions to take into consideration.

Whether any given government policy on language is valid and effective partly depends upon how well it is perceived and accepted, if not supported, by students, teachers and parents. Such perceptions are voiced through answers to the questionnaires. Some do call into question a few time-honoured assumptions. It is hoped that they will not be dismissed out of hand but be seen for what they are: a signal for decision makers, teachers and parents to reassess the situation as regards the language of education in the light of the latest developments in second language theory and of CBSLI experience.

CHAPTER 1

CONTENT-BASED SECOND LANGUAGE INSTRUCTION:
A THEORETICAL APPRAISAL

1.1 INTRODUCTION

Content-based second language instruction is known under various names like *sheltered courses* (Hauptman et al. 1988), *content-based second language teaching* (Snow et al. 1989; Mohan 1986), *ESL through subject matter teaching* (Krashen 1982) and *integrated approach to second language teaching* (Genesee 1987). It has been one of the most popular and at the same time controversial approaches to second language teaching. For the past ten years, it has generated a substantial number of studies in various parts of the world. Surprisingly though, no comprehensive evaluation of the language learning theory behind this approach has yet been undertaken. The intention in this chapter is to carry out such an evaluation in order then to assess the relevance of the said theory to the various content-based second language instruction programmes.

We shall begin with an overview of those communicative language teaching theories which have been ostensibly linked with CBSLI. This will be done from a historical perspective so as to bring out the factors which have led to its widespread acceptance in the language teaching world. We shall then proceed with an analysis of CBSLI's underlying hypotheses which will be evaluated in the light of relevant studies.

When we look at such traditional language teaching methods as the Audio-lingual and Direct Methods, we see that they focused on the mastery of structures rather than on communicative proficiency. They assumed that the greatest problem to the learner was

posed by the structural aspects of the target language. Therefore, traditional approaches to language teaching involved explicit teaching of language structures. As D'Anglejan noted (1978), the routine in the class was to introduce the specific structures and then to make students listen to and practice the structures till they could produce them automatically.

Growing dissatisfaction with such teaching methods led applied linguists to question the theoretical assumptions underlying traditional approaches to language teaching and to develop new ones emphasizing the functional and communicative potential of language. Evidence from sociolinguistic and psycholinguistic research also made them search for a better understanding of the nature of second language learning processes. Human relations, interaction between students and teachers, the role of the affective climate in the classroom came to be the centre of attention.

The mid seventies saw the emergence of the such key concepts as 'communication' and 'communicative competence'. They soon gained an increasing acceptance in the language teaching world and initiated various trends of communicative language teaching.

Unlike traditional language theories such as structural linguistics, the theory of language on which communicative approaches were based derived from a theory of language as communication. This theory was developed in part as a reaction to Chomsky's theory of competence. Chomsky held the view that (as quoted in Hymes)

> Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance (1979:5).

For Chomsky, it was 'competence' defined as 'the speaker-hearer's knowledge of

language' which was the focus of linguistic theory, and it was this knowledge which enabled the speaker to produce grammatically correct sentences. It distinguished itself from 'performance' which was seen as 'the actual use of language in correct situations.' Chomsky's view of linguistic study was discussed in Hymes' paper 'On Communicative Competence.' Hymes was critical of the way Chomsky used the terms 'competence' and 'performance' and presented his own redefinition. According to Hymes, Chomskian linguistics with its narrow concept of competence represented a 'Garden of Eden view' (p.8) which did not take sociocultural features into account (p.7). Instead, he suggested that a linguistic theory should be considered as a part of a general theory which integrated communication and culture. Hymes elaborated his own theory of competence in which he maintained the view that a speaker who acquired communicative competence needed to have both knowledge and ability for language use with respect to

1. whether (and to what degree) something was formally possible;

2. whether (and to what degree) something was feasible in virtue of the means of implementation available;

3. whether (and to what degree) something was appropriate (adequate, happy, successful) in relation to the context in which it was used and evaluated;

4. whether (and to what degree) something was in fact done, actually performed, and what its doing entailed (Hymes 1979:19).

Subsequently, numerous versions of Communicative Language Teaching (CLT) all of which concentrated on the notion of communicative competence, were developed. These innovative approaches to language teaching catered to the needs of the learner by taking into account aspects of the learner's personality. In almost all such recent approaches as the Silent Way or Suggestopedia and more recently CBSLI, the influence of CLT can be observed. As Stern (1983:473) puts it

the communicative approach has so profoundly influenced current thought and practice on language teaching strategies that it is hardly possible today to imagine a language pedagogy which does not make some allowance at all levels of teaching for a non-analytical, experiential or participatory, communicative component.

The driving force behind this move towards communicative competence was the influential work undertaken by an international group of scholars under the auspices of a committee of the Council for Cultural Co-operation of the Council of Europe. Their most significant contribution was the idea of a unit-credit system where language learning courses are based on learning tasks which are broken down into "portions or units, each of which corresponds to a component of a learner's needs and is systematically related to all other portions" (van Ek and Alexander 1980:6). The Council's propositions were used as a basis for developing communicative syllabuses for language teaching (see Wilkins 1976). Mention should also be made of the work of the Council of Europe and also research mostly done by British applied linguists such as Wilkins, C. Brumfit, K. Johnson, H. Widdowson who have had a strong influence on the development of a theoretical basis for the design of communicative language teaching programmes.

The communicative approach to language teaching which recognizes the importance of students as creative participants in the learning process and also the affective factors that influence learning, gave rise to several methods which can broadly be categorized as humanistic approaches. The first is the Silent Way which has been developed in the United States by Gattegno. It is based on the premise that the teacher should remain as silent as possible in the classroom and the learner should be encouraged to produce as much language as possible by using colour charts and the coloured cuisenaire rods (Richards 1986). As Stevick explains, the tasks of a Silent Way teacher are (1) to teach, (2) to test, and (3) to get out of the way (Stevick 1980:56).

The learning hypotheses underlying Gattegno's Silent Way are:

[1] Learning is facilitated if the learner discovers or creates rather than remembers and repeats what is to be learned.

[2] Learning is facilitated by accompanying (mediating) physical objects.

[3] Learning is facilitated by problem solving involving the material to be learned (Richards 1986:99).

Another method is Community Language Learning, developed in the United States by Charles Curran, which emphasizes the importance of learner factors and the humanistic side of language learning, and not merely its linguistic dimension. In Community Language Learning or Counselling-Learning, as it is sometimes called, the basic premise comes from psychological counselling techniques. The aim is to build trust between teacher and students by creating a warm and supportive classroom environment.

Nunan (1991:236) explains how this method works in the following way:

> The learners are first seated in a closed circle with the teacher on the outside. When learners want to say something, they call the teacher across and whisper whatever it is the want to communicate to the teacher in the L1. The teacher whispers back an L2 translation, and the learner then repeats this to the group. The process continues for some time, the learners' utterances being recorded on tape. At the end of the session, the group generally has a lengthy taped interaction, all in the target language. This is subsequently replayed, analysed and used as the basis of more formal language work.

Community Language Learning has a number of shortcomings like the lack of a syllabus, a focus on fluency through parrot-like techniques rather than accuracy and the need to train teachers in counselling.

The third is the Natural Approach, initiated by T. Terrell and S. Krashen. As with almost all other communicative approaches, they see communication as the primary function of the language and claim that the focus in language teaching should be on comprehensible and meaningful activities rather than on the production of grammatically perfect utterances.

The Natural Approach is based upon Krashen's second language acquisition theory which will be discussed further in the following pages. But basically what Krashen and Terrell argue is that for successful second language acquisition all the activities in the classroom should be designed to provide comprehensible input which is the most important element in language acquisition.

Much has been written on the communicative approach, and an extensive review of the literature would be inappropriate here. However, the following five-point summary of the main features of communicative language tasks, which are adopted by CBSLI too, would be useful.

[1] The learner must have a reason for communication.

[2] There must be an information gap.

[3] Attention must be focused on meaning, on the 'what' rather than the 'how'.

[4] The interactants should be able to use every means at their disposal -non-verbal as well as verbal- to negotiate meaning.

[5] The success of the interaction must be judged in terms of how well the task has been accomplished rather than in terms of the accuracy of the language.

(Ellis 1982:75).

To sum up, common to all versions of communicative language teaching is a more humanistic approach to teaching, one in which the priority is given to the interactive processes of communication. The importance of providing learners with opportunities to use their English for communicative purposes is stressed.

In the next section, we will see that like the communicative approach, CBSLI suggests a learner-centred, interactive and low anxiety situation in which students negotiate the meaning of their subjects.

1.2 THEORIES BEHIND CONTENT-BASED INSTRUCTION

The notion of integrating second language instruction into regular subject-matter instruction is not a new one. In the 1970s linguistics moved towards the study of language through discourse analysis with the recognition that language cannot be studied in isolation from the context in which it is used. For instance, Widdowson (1978:20) wrote that the most successful strategy for teaching a second language in school consisted in using it as the language of instruction for the teaching of other school subjects. The view that an integrative approach would allow the second language to be learned or developed naturally as a vehicle for learning and communication gained ground challenging the traditional focus on language as an exclusive object of study. Moved by the same conviction, Mohan (1986:18) opposed language teaching in isolation from substantive content in the following manner:

> Regarding language as a medium of learning naturally leads to a cross-curriculum perspective. We have seen that reading specialists contrast learning to read with reading to learn. Writing specialists contrast learning to write with writing to learn. Similarly, language education specialists should distinguish between language learning and using language to learn. Helping students use language to learn requires us to look beyond the language domain to all subject areas and to look beyond language learning to education in general. Outside the isolated language classroom students learn language and content at the same time. Therefore, we need a broad perspective which integrates language and content learning.

The premise that language can serve as a medium of learning forms the cornerstone of CBSLI. It has received considerable support from the Bullock Report which led to the development of the Language Across the Curriculum movement. In 1975 a committee of inquiry into language in British schools commissioned by the British government published a report recommending that language instruction in the schools should cross over all subject-matter domains. The major recommendations of the report were:

[1]   genuine dialogue between student and teacher in both oral and written modalities;

[2]   guidance and facilitation rather than control of student learning by the teacher;

[3] encouragement of student-student talk in a collaborative learning context;

[4] encouragement of meaningful language use by students rather than correctness of surface forms;

[5] conscious integration of language use and development with all curricular content rather than teaching language and other content as isolated subjects;

[6] a focus on developing higher level cognitive skills rather than factual recall;

[7] task presentation that generates intrinsic rather than extrinsic motivation (Cummins 1984:224-5)

In programmes which followed the committee's report, the emphasis was on the relationship between language and content learning: "students are not only given opportunities to learn to write and learn to read but are also encouraged to *write to learn* and *read to learn* in order to fully participate in the educational system" (Brinton et al. 1989:6).

CBSLI has also been influenced by the English for Specific Purposes (ESP) literature with respect to the importance of context and to the focus on meaning and not on language form. ESP is even considered as the best known and most documented example of CBSLI models by the advocates of CBSLI (Brinton et al. 1989).

Moreover, because of the elements it contains such as learner-centredness or the importance of communicating and integrating successfully through the medium of English, ESP is also seen as a communicative method. Robinson quotes Brumfit (1980:11)

> First, it is clear that an ESP course is directly concerned with the purposes for which learners need English, purposes which are usually expressed in functional terms. ESP thus fits firmly with the general movement towards "communicative" teaching of the last decade or so.

ESP is usually defined with reference to utilitarian purposes and shares CBSLI's concern for the needs of the learner. Although they both employ the same methods based on communication and meaning, ESP differs from CBSLI in one aspect which is that while CBSLI aims at developing both content and language skills, ESP courses are intended to promote particular language and communicative skills (Graham and Beardsley 1986).

Immersion programmes have also had a significant impact on the development of CBSLI. Since the 1960s Immersion programmes have yielded enormous amounts of evidence validating the use of target language for instructional purposes in terms both of language proficiency and of mastery of subject matter. They have prepared the ground for the implementation of CBSLI type programmes in a number of countries.

Canadian immersion programmes with their theoretical rationales and research findings will be examined in Chapter two. For the present, suffice it to say that the immersion model, as Brinton et al. (1989:8) put it, "is a carefully researched example of content-based second language instruction at the elementary and early secondary level. It illustrates the effectiveness for kindergartners to adolescents of instruction which focuses on teaching subject matter through the medium of the second language."

CBSLI owes much to the immersion model. It is defined by most of the theorists as the integration of particular contents with language teaching aims (Brinton et al. 1989, Snow et al. 1989). More specifically, as Brinton et al. (1989:2) explain

> it refers to the concurrent teaching of academic subject matter and second language skills. The language curriculum is based directly on the academic needs of the students and generally follows the sequence determined by a particular subject matter in dealing with the language problems which students encounter. ... Thus, both in its overall purpose and its implementation, content-based instruction aims at eliminating the artificial separation between language instruction and subject matter classes which exists in most educational settings.

In other words, CBSLI aims to ensure successful language acquisition as well as content mastery in a setting where the emphasis is on providing comprehensible input and a desire in the students to learn the language in order to engage in meaningful and interesting communication.

Quite clearly, the effectiveness of the method depends upon the adequacy of the following parameters:

[1]   whether the integration of content learning with language teaching actually provides meaningful contexts for language learning (educational parameter)

[2]   whether CBSLI classrooms do generate the comprehensible input in the target language to stimulate second language acquisition (linguistic parameter)

[3]   whether CBSLI offers a motivational impetus to language learning (psychological parameter)

These parameters will now be scrutinized individually, in relation to available evidence and theory in order to see if CBSLI's claims can be substantiated.

1.2.1   Does the integration of content learning with language teaching provide meaningful contexts for language learning?

A widely accepted argument for integrating language and content teaching is that "language is learned most effectively for communication in meaningful, purposeful, social and academic contexts" (Snow 1989:202). Tucker and D'Anglejan (1975:162) also argue that using L2 as the medium of instruction would place the focus of language activity in the classroom on communication. They further state that "the student can most effectively acquire a second language when the task of language learning becomes incidental to the task of communicating with someone... about some topic... which is inherently interesting to the student."

However, a few central questions arising from this argument should be addressed here: How do we know that what actually happens in a CBSLI classrooms? In other words, does a CBSLI classroom really provide the required conditions for communication to occur? Do teachers and L2 students communicate in the content classroom? Does using L2 as a medium of instruction guarantee that there will be successful communication?

CBSLI, on the basis of the findings of the Canadian immersion programmes, claims that it is possible to give positive answers to the questions cited above. However, while assumptions about the learner and ways of learning seem to be plausible in principle, they have not been tested critically and systematically as far as Canadian immersion programmes are concerned. As current research on these programmes indicates (Swain and Lapkin 1982; Edwards et al. 1984) many studies, if not all, have employed a traditional approach to evaluate the effectiveness of CBSLI, i.e. a comparison of the results of French-only programmes with regular (first language, which is English) programmes on student learning achievements, as measured by standard language proficiency tests and subject- related achievement tests. These procedures, regrettably, fail to observe real classroom exchanges. They do not monitor what actually goes on there and to what extent the target language is used for communicative purposes in the class.

But what of the Turkish implementation of CBSLI in institutions where English is the medium of instruction? A majority of Turkish educators and administrators certainly subscribe to the view that the best way to learn a foreign language is to be exposed to it. They also believe in the effectiveness of using the target language as the medium of instruction. However, when one looks at what really goes on in the classroom, it becomes apparent that teaching does not necessarily prepare the learner for face-to-face communication, due to the fact that where the teacher shares a mother tongue with his/her students, the maintenance of the use of the target language will naturally be limited. Unfor-

tunately, there is no empirical evidence that the use of the second language as the medium of instruction actually fosters its use for communication in the class, especially at university level. At higher school level however, Aksu and Akarsu (1985), have carried out a survey of teachers' own perceptions and performances in Anadolu Lycées. They asked teachers to what extent they maintained the use of English in content classes in physics and mathematics. Up to 82% of teachers responded that they had difficulty with teaching in English and that they often had to break into Turkish in order to organize the classroom or to give instructions. When they were asked to give reasons for operating in Turkish instead of English, the teachers identified the following problems:

1. difficulty in communicating with the students,

2. presence of low ability students in the class,

3. insistence on the part of students on speaking Turkish,

4. unease at teaching a course in a foreign language (being non-native
   speakers of English).

These problems, compounded by the lack of co-operative work between language and course teachers and class size, obviously detract from the requisite conditions for content teaching in second language to enhance both language and subject-matter learning. Students find themselves in a position where they can learn neither language nor content and CBSLI in Turkish classrooms ends up alternating (rather than fusing) content and language with a great amount of explanation of vocabulary, grammatical corrections etc.

Also, Parkinson's study (1983) of communicative language courses in French for English-speaking students in Scottish schools reveals that the use of French for managerial purposes was restricted to 'bonjour' and 'au revoir' in as many as 60% of the classrooms he observed. His study also showed that even in 10% of the classes where French was used extensively, English was still used for detailed explanation.

The question remains as to which features of CBSLI classroom practice contribute to learners' second language development if at all. Is it the instruction itself or the socio-economic background of students or the status of the languages learned or the ability of teachers?

In order to answer the question of whether a particular instructional method provides a suitable context for real communication in the classroom, a detailed survey of what goes on in the classroom is required. A comprehensive scheme for the survey of foreign language classes was developed by Fanselow (1977). It is known as FOCUS: 'Foci for Observing Communication Used in Settings.' In this Fanselow distinguishes five parameters of communication taking place in the language class: 1. *Source* :Who communicates? 2. For what pedagogical *purpose* 3. In what *medium?* 4. *How* is that medium used? 5. What *content* is communicated? For each of these questions, Fanselow offers subcategories under which to classify the answers to the question. Whether schemes like this one would work with CBSLI classroom practice remains to be seen but the point is that in order to validate the assumptions about language learning empirical verification is essential.

1.2.2 Does CBSLI generate the comprehensible input in the target language to stimulate second language acquisition?

The linguistic basis of CBSLI has been formulated by Krashen in his second language acquisition theory (SLAT). Krashen presents five main hypotheses in support of his theory that second language acquisition depends upon a sufficient amount of comprehensible input being provided within a real communication situation. The hypotheses are:

1. The Acquisition/Learning Hypothesis

2. The Monitor Hypothesis

3. The Natural Order Hypothesis

4. The Input Hypothesis

5. The Affective Filter Hypothesis

The main focus of discussion will be on the Input Hypothesis. The point is to ascertain whether Krashen's SLAT really presents a coherent theory for CBSLI. As far as the remaining four hypotheses are concerned, Krashen's views have been presented and discussed extensively elsewhere, so we will not attempt to examine them in detail (for a detailed critical review see Gregg 1984, McLaughlin 1978, 1987). However, since Krashen's SLAT is seen as the theory on which CBSLI programmes are grounded it is necessary to present Krashen's arguments on these hypotheses in outline form.

1.2.2.1 The Acquisition/Learning Hypothesis

Krashen maintains that there are two distinctive ways of developing competence in a second language (see Table 1.1). 'Acquisition' is a subconscious process identical to the process of first language acquisition in natural communication. On the other hand, language 'learning', a conscious process, occurs as a result of formal study where the learner's attention is focused on the formal properties of the L2 (Krashen 1985:1).

TABLE 1.1 THE ACQUISITION - LEARNING DISTINCTION	
Acquisition	Learning
similar to child first language acquisition	formal knowledge of language
'picking up' a language	knowing about a language
subconscious	conscious
implicit knowledge	explicit knowledge
formal teaching doesn't help	formal teaching helps

(Krashen and Terrell 1983:27)

This hypothesis has drawn criticism on various grounds from several theorists and second language researchers. Stern (1983:20) for one argues that

> the distinction which Krashen has made is valuable, but the restriction it implies for the user of the term 'learning', namely as deliberate school-like learning, is a disadvantage.

Agreeing with this point, Ellis (1984) states that the Acquisition/ Learning distinction might imply that classroom environments will slow down second language acquisition rather than speed it up.

Krashen, in response to these arguments, supports the view that classroom is a much better setting than natural settings provided that the right kind of qualitative input needed for acquisition is available. However, this statement from Krashen is also criticized. McLauglin, emphasizing 'the slipperiness' of the acquisition/learning distinction (McLaughlin's words), points to the difficulty of distinguishing introspectively 'rule' application and 'feel':

> But if the setting is not the distinguishing characteristic of acquisition and learning in Krashen's sense, it is important for him to make clear what he means by 'conscious' and 'subconscious'. Krashen has not provided a definition of these terms, although he did operationally identify conscious learning with judgements of grammatically based on 'rule' and subconscious acquisition with judgements based on 'feel' (1987:21).

The real problem with the acquisition/learning distinction, as McLaughlin rightly points out, is that how one is to know whether a learner is operating on the basis of rule or feel.

1.2.2.2 The Monitor Hypothesis

The fundamental claim behind the Monitor Hypothesis is that "learning has only one function, and that is as a monitor or editor that checks and repairs the output of the acquired system" (Krashen 1982:5). Thus, formal knowledge of the second language has a limited function and is used to make corrections, before or after the utterance is

produced.

Krashen specifies three conditions for use of the Monitor:

[1] The performer has to have *time*. There must be sufficient time to choose and apply a learned rule. In rapid conversation, taking time to think about rules, such as the subjunctive or subject-verb agreement, may disrupt communication.

[2] The performer has to be *focussed on form*. Even when we have time, we may be so involved in *what* we are saying that we do not attend to *how* we are saying it.

[3] The performer has to *know the rule*. S/he needs to have a correct mental representation of the rule to apply it correctly. But even the best language students do not usually master all the rules presented to them (Krashen 1982:16).

The most debatable point about the Monitor Model is individual difference in the rate and extent of acquisition. Krashen does not deny the fact that individual variation exists. He explains that there are three types of Monitor users:

[1] *Monitor over-users* are those who monitor all the time when using a second language. They constantly check their output with their conscious knowledge of the second language. As a result, they speak hesitantly, often correcting themselves in the middle of the conversation.

[2] *Monitor under-users* are second lnguage performers who prefer not to use their conscious knowledge, even when conditions allow it. Underusers are not influenced by error correction. They can self-correct by using a 'feel' for correctness.

[3] *The optimal Monitor user* is the performer who us the Monitor when it is appropriate and when it does not interfere with communication (Krashen 1982:19-20).

The question is that how we know when an individual is consciously applying a rule. If we cannot, then how do we say that some people are 'over' users and some

'under' users of the Monitor? The Monitor Model seems to be too vague and imprecise to provide an account of the process of second language acquisition.

1.2.2.3 The Natural Order Hypothesis

The Natural Hypothesis states that we acquire the rules of language in a predictable order. Acquirers of language tend to acquire certain grammatical structures early and others later (Krashen 1982). Krashen explains that this natural order is the result of the acquired system, not learning.

The case for the Natural Order Hypothesis is based on the morpheme studies, which, according to McLaughlin (1987), are of questionable methodological validity and provide little information about acquisitional processes.

1.2.2.4 The Input Hypothesis

The Input Hypothesis states that

> humans acquire language in only one way, by understanding messages, or by receiving 'comprehensible input'... We move from i, our current level, to i+1, the next level along the natural order, by understanding input containing i+1 (Krashen 1985:2)

Krashen regards Input Hypothesis as the single most important concept in second language acquisition in that it attempts to answer the question of how we acquire language (1982). Here is how Krashen presents the Input Hypothesis:

[1]   The Input Hypothesis relates to acquisition, not learning.

[2]   We acquire by understanding language that contains structure a bit beyond our current level of competence (i+1). This is done with the help of context or extralinguistic information.

[3]   When communication is successful, when the input is understood and there is enough of it, i+1 will be provided automatically.

[4]   Production ability emerges. It is not taught directly (1982:21-2).

In addition to describing the Input Hypothesis, Krashen presents evidence in support of this hypothesis. The first piece of evidence that Krashen offers is the so-called 'silent period'. According to Krashen children learning a second language remain silent for a period of time during which they build up competence in the second language through listening and understanding the language to which they are exposed. He points out that "in accordance with the Input Hypothesis, speaking ability emerges on its own after enough competence has been developed by listening and understanding" (1982:27).

What Krashen means by 'silent' period is a commonly observed fact. It is true that some learners when first exposed to a new linguistic environment are quite hesitant for a time. However, as McLaughlin (1987) and Gregg (1984) rightly criticise, this is hardly evidence for the precise way the language is acquired. It does not go beyond stating an uncontroversial observation on how learners behave in a new second language environment. Besides, there might be other explanations for learners' silence such as anxiety, personality differences etc.

Another argument which Krashen puts forward for the Input Hypothesis has to do with exposure to a second language. He distinguishes between mere exposure to a second language and exposure to comprehensible input. He claims that what leads to second language acquisition is the latter. This strong claim has been challenged with questions being raised regarding the precise role comprehensible input plays in SLA. For instance, McLaughlin (1987:39) argue that merely stating that input is comprehensible when it is meaningful to and understood by the learner, is an inadequate definition.

Besides, defining comprehensible input as a kind of input that contains structures just beyond the current level attained by the learner, begs the question as to what the learner's current level precisely is. Therefore, "in the absence of any explicit theory as to

what the prior knowledge of the learner consists of, we lack any indication of precisely how the input hypothesis works" (White 1987:96).

As for the question of simplified input, Krashen suggests that caretaker speech, foreigner talk, teacher talk or any form of simplified input intended for communication is beneficial for language acquisition because it is roughly-tuned to the level of the non-native speaker (1985:9). He distinguishes three characteristics of simplified input which are supposed to aid language acquisition: 1) These simple codes are used to communicate meaning, not to teach language 2) They are roughly-tuned, not finely tuned to the learners' current level of linguistic competence 3) They provide the non-native speaker with comprehensible input.

However, as with the other evidence Krashen presents to back up his assertions, simplified input or the more commonly used term, caretaker speech, does not have any explanatory power as far as second language acquisition goes. Krashen does not show that the existence of caretaker speech has any bearing on second language acquisition. On the contrary, it might have detrimental effects because language is introduced to the learners in a simple form, thus depriving them of the genuine input which is crucial for language acquisition (White 1987). Obviously, it is not compatible with Krashen's idea of i+1 either.

As additional evidence Krashen (1985) cites the findings of immersion and sheltered [1] language teaching programmes. He argues that

> immersion 'works' because, like other good methods, it provides students with a great deal of comprehensible input... the input hypothesis thus asserts that it is the comprehensible input factor that is responsible for the success of immersion, not simply the fact that immersion students are exposed to a great deal of the second language (pp.16-7)

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[1] Sheltered language programmes aim to teach a subject matter course to less advanced second language learners by a content area specialist, sometimes aided by a second language teacher. More detailed information is given in Chapter two.

Likewise, he claims that the same argument is valid for the success of sheltered programmes.

> A crucial characteristic of the sheltered class is that it is a real subject matter class, not 'ESL maths' for example; or selections from subject matter introduced as part of the language class. Both the focus and the test are on the subject matter. This is done to ensure that the students' attention is on the message, not the medium, a practice that will, according to the theory, result in optimal language acquisition (1985:71).

Similarly, Krashen regards bilingual programmes as successful because they provide good instruction in the first language together with comprehensible input.

Once again, Krashen presents his so-called evidence without any empirical verification. All of his arguments give the impression that Krashen is interpreting the results of studies, on immersion programmes for example, in a way which beg the question of just how comprehensible input is above all factors the one most likely to have any effect on the route or rate of second language acquisition. However, such a strong claim should be tested, i.e. if we take comprehensible input as the most important factor of SLA as Krashen argues, then we would have to assess the effect of comprehensible input as an independent variable. That seems impossible while even a precise definition of comprehensible input is wanting.

The second point regarding Krashen's interpretation of the results of immersion or sheltered programmes, is his selectiveness of materials published in SLA in terms of geographical provenance for instance. While constantly referring to the studies carried out in Canada, work done in other countries is neglected and rarely cited by Krashen. There is no space devoted to discussing the results of programmes in Tanzania, the Philippines or Nigeria where the provision of comprehensible input by native speakers of the target language, which is claimed to be necessary for second language acquisition by Krashen, is not that easy.

Another point about the input hypothesis which needs to be dealt with is the strong objection advanced by several researchers (Swain 1983, Wong Fillmore 1985) to Krashen's rejection of the possibility that production serves any purpose in SLA. He makes the claim that "we acquire spoken fluency not by practicing talking but by understanding input, by listening and reading" (1982:60).

The arguments put forward against this claim suggest that understanding the input is not enough for language acquisition. Learners should be given the opportunity to produce the new forms so that they can get feedback on their production of the language. For instance Long (1983b) focuses on the influence of interaction in the classroom and opposes Krashen's view that as long as the input is comprehensible, at the appropriate level just ahead of the learners' current level (i+1), the learner will be able to progress in the target language. Instead, Long supports the view that comprehensible input leads to acquisition when it contains interaction. This interactive approach to second language learning is predicated upon the view that interaction between teacher and student and between students facilitates the comprehensibility of input through participation and initiative-taking in the classroom (see Chapter 6 for a detailed discussion).

Wong Fillmore, emphasizing the importance of negotiation of meaning in the class, also notes that

> Second language learning in a school context thus requires the active participation of both learners and those who provide them with appropriate 'input'. Learners have to work actively on this input, guessing what is being talked about and continually trying to sort out relationships between observed speech and experiences. Unless the speakers use the language in ways that permit the learners to figure out what is being talked about, the learners will not be able to perform the necessary analyses on the language. Unless the learners try to sort out things and provide feedback to the speakers to aid them in making the necessary adjustments, learning will not occur (as quoted in McLaughlin 1987:51).

Genesee further argues that the effectiveness of immersion programmes, which Krashen regards as evidence of the validity of the input hypothesis, depends a great deal

on the quality of interaction between the teacher and the students. But he also concedes that "little systematic examination of interaction patterns in immersion classes has been undertaken so that we do not know precisely how language is used by immersion teachers" (1987:180).

Swain (1985) also believes that along with comprehensible input in second language acquisition, there should be a demand for 'comprehensible output'. She argues that learners should be given opportunities to produce the target language which will enable them to test out hypotheses about the second language to see if they work. To Swain

> producing the target language may be the trigger that forces the learner to pay attention to the means of expression needed in order to successfully convey his/her own intended meaning (1985:249).

However, Krashen's argument for input rather than output, in principle, might account for how the learners, under some specific circumstances, build up a second language competence. It might be argued that in a foreign language context where the learner has no direct contact with native speakers and the use of second language is limited to the classroom, the need to produce the target language is not of the outmost importance. What is important in these contexts is to be able to listen and to read in the target language.

However, if the target language is used to convey the curriculum content, then the notion of interaction and the ability to initiate discussions becomes important. In these contexts learners have to cope with three tasks: first, understanding the instructions given in the L2, secondly, learning the content itself and thirdly attaining an adequate level of linguistic proficiency to convey their opinions in interactions with the teacher and other students.

As Genesee (1987:184) points out

using language productively is particularly important when studying academic material because talking about such material gives the learner an opportunity to analyze, manipulate, and evaluate it. ... passive comprehension is probably insufficient for true assimilation and retention of new information.

Krashen's response is that he only rejects the Strong Interaction Hypothesis which predicts that no acquisition will occur without interaction. Instead, he adopts a weak form of the Interaction Hypothesis which only claims that "two-way interaction facilitates acquisition in that it allows more negotiation of meaning, and thus gives the acquirer optimal data to work with, i.e. comprehensible input" (1985:34). However, he cannot escape another attack from Gregg (1986:121) who states that

> Krashen allows that while in theory one could learn a language without interaction, interaction can be helpful. This closely resembles the claim that while in theory one could acquire a language without any conscious learning, learning can be helpful. The only difference is that interaction question does not threaten the meretricious elegance of Krashen's theory.

To conclude the discussion on Krashen's claim that acquisition depends upon understanding input, we believe that all theorists in SLA would agree that comprehensible input need be provided for second language development to take place. The point is that there are other factors involved in SLA at least as important as comprehensible input, such as external factors or output which Krashen tends to overlook.

1.2.2.5 The Affective Filter Hypothesis

An additional point Krashen makes in his attempt to present a coherent theory of second language acquisition is that comprehensible input is necessary but that there also has to be a low affective filter on the part of acquirers.

Krashen maintains the view that while the input is the primary causative variable in second language acquisition, affective variables also play an important part in either facilitating or hampering the delivery of input to the Language Acquisition Device (LAD). Krashen defines the affective filter as "a mental block that prevents acquirers

from fully utilizing the comprehensible input they receive for language acquisition" (1985:3). Thus, if the filter is up, the input is blocked and acquirers do not profit from it; if the filter is down, the input reaches the LAD and becomes acquired competence.

The hypothesis identifies three kinds of affective or attitudinal variables related to second language acquisition:

1. Motivation: Performers with high motivation generally do better in SLA (usually, but not always, "integrative")

2. Self-confidence: Performers with self confidence and a good self-image tend to do better in SLA

3. Anxiety: Low anxiety appears to be conducive to SLA, whether measured as personal or classroom anxiety (1982:31).

Thus, the main argument is that if there is a high affective filter i.e if the acquirer is unmotivated, not self-confident, and lacks the intention of becoming a member of the target language group, full language acquisition does not occur.

The first question to be dealt with is whether an affective filter hypothesis is actually needed to explain individual differences affecting the acquisition of a second language (McLaughlin 1987, Gregg 1984, 1986). Gregg bluntly writes

> It is uncontroversial to claim that affect affects adult acquisition of a second language; most people accept the claim that, ceteris paribus, an unmotivated learner will acquire less than a motivated one, a nervous learner less than a relaxed one, a self-hating learner less than a self-respecting one. But this by no means justifies a theory postulating an Affective Filter the growth of which and the function of which are not explained, and for the existence of which there is no evidence (1984:94)

The second point to be discussed is Krashen's reference to CBSLI programmes as supporting evidence for his Affective Filter Hypothesis. He claims that thanks to the rich subject-matter context which contains the new elements to be acquired and also thanks to

the inherent relevance of that content, students will be able to focus on the messages and not on language form. This obviates anxiety or mental blocks caused by formal language teaching, thus lowering the affective filter and enhancing the chances for acquisition to occur.

The problem however is that even when the content of the curriculum is designed to suit the needs of the students and their particular interests, a particular subject matter may not necessarily meet the needs or fire the interest of all the students. This point will be discussed further while examining the role of motivation in CBSLI.

1.2.2.6 Evaluation of Krashen's Second Language Acquisition Theory

Having discussed the limitations of Krashen's second language acquisition theory, it appears that although his theory has gained considerable popularity among researchers, or rather second language teachers, his claims are not supported by empirical evidence.

However, it should also be noted that Krashen deserves credit for advocating a move from grammar-based to communicatively oriented language teaching approaches, a focus on comprehension and meaningful communication, provision of sufficient conditions for successful second/foreign language acquisition and lastly for a consideration of the role of affective factors in language learning.

1.2.3 Does CBSLI offer a motivational basis for second language acquisition?

Though the role of affective factors has been discussed to some extent in relation to Krashen's Affective Filter Hypothesis, the notion of providing a motivational basis through subject matter needs further examination. The rationale for such an approach is that in content teaching the focus is on the subject-matter which is supposed to be relevant to the interests of students. Thus language is learned with a focus on message not on language only. Therefore, in CBSLI "language learning may even become incidental

to learning about the context (e.g. in immersion classes)" (Snow et al. 1989:202).

In support of the contention that the use of content relevant to the learner increases motivation in the course, Chamot (1987:235) also points out that "students can be motivated not only by the topics presented but also by knowing that they are developing the concepts and skills associated with these subjects, in other words, that they are actually doing "real" school work instead of merely learning a second language for application that have yet to be revealed."

Referring to the immersion approach, Genesee (1987:186) also states that the premise "is that students will be motivated to learn the second language to the extent that they are motivated academically. Language according to this approach is merely a tool to be learned in order to attain the real goal, that of academic success."

As the quotations cited above suggest, the use of academic topics and materials selected for the content course in second language instruction is promoted for both cognitive and affective reasons. In cognitive terms, as Snow points out, these materials provide the necessary context in which form and meaning in the language acquisition process are related. As far as affective reasons are concerned, text-specific materials are considered as a means of motivating students.

It does not seem particularly revolutionary to assume that conveying the content of the curriculum through a second language would have a positive influence in promoting learners' motivation for second language learning. Such integration would help eliminating motivational problems because unlike those learners who have to deal with the target language for its own sake in isolation from the other subjects, those in CBSLI programmes where second language and subject matter are integrated, would be more attentive in the learning situation, would take assessments more seriously, would find the course more interesting and rewarding.

However, the point is that there are other factors which may well undermine the validity of the claim that focusing on content increases motivation. An individual might well be interested in the topic but prefer not to study it in a second language because of a feeling that such a medium is inappropriate, or because of a dislike for the teacher, for instance, or simply because of his/her lack of competence in the second language.

Although common sense suggests that such an approach might well increase students' motivation, it just is not enough. It seems necessary to define the notion of motivation and its relation to other characteristics of the individual such as interest in second language study, attitude towards teacher or foreign culture. As Gardner suggests "motivation involves four aspects; a goal, effortful behaviour, a desire to attain the goal and favourable attitudes toward the activity in question" (1985:50).

Hutchinson and Waters (1987:48) also agree that motivation is a complex and highly individual matter and that there is no simple answer to the question: "What motivates students?". They further criticise the assumption of ESP researchers that the key to motivation is relevance to target needs: providing "medical texts for the student of Medicine, Engineering English for the Engineer and so on... there is more to motivation than simple relevance to perceived needs."

Statements like "immersion programmes were designed to capitalize on individual students' motivation to learn academic topics of *their own choosing* (italics added) as a basis for second language learning" (Genesee 1987:187) do not prove that this is always the case. (It might be in Canada which is the main source of all positive reports on CBSLI programmes, but not in Third world countries, for example). In fact, Mead's (1980) research into the motivation of students following ESP courses in the faculties of Medicine, Agriculture and Veterinary Science at a university in the Middle East, shows that there is no necessary relationship between subject-matter course materials and what learners really want or need. In Mead's study

the students were all given ESP courses based on texts from their subject specialism: Medical texts for the Medical students because of the apparent relevance to their course of study... however, only the medical students were really motivated by their subject-specific texts. The Agriculture and Veterinary students were not motivated by their subject-specific texts, because they didn't really want to study those subjects. They had wanted to be Medical doctors, but there were not enough places in the medical faculty to accommodate them all... Agriculture and Veterinary texts, therefore, were like salt in a wound. They had a de-motivating effect, because they reminded the students of their frustrated ambitions (In Hutchinson 1987:57)

Similarly, every year, in Turkey, on a date determined by University Nominees Selection and Placement Council, in association with the Council of Higher Education (YOK), two exams are administered and given to university candidates. The first test serves to pre-select candidates for the second test. Candidates are placed in universities according to their test scores, to subject preference and to the hosting capacity of universities. Students are entitled to choose between 18 different faculties throughout Turkey. Being offered a place in one's 18th choice may well be preferable to being a member of the vast army of the unemployed, but the fact remains that a majority of the students are assigned to Engineering courses while what they really want to do is a computing course. Under these circumstances, it is quite reasonable to assume that subject-matter course integrated with second language teaching would be doubly off-putting for students instead of being a source of motivation.

At this point, given the acknowledged link between motivation and the process of learning a second language, mention should be made of the pioneering work of Gardner and Lambert which brought motivation and other attitudinal and affective variables to the forefront of research. They indeed suggested that the type and degree of motivation, i.e. students' learning preferences, are closely related to success in second language acquisition.

With respect to the main motives prompting individuals to learn, Gardner and Lambert (1972) have laid particular emphasis on a distinction between an 'instrumental'

motive and 'integrative' motive. In their view, learners with an integrative motivation i.e. a sincere and personal interest in the people and culture coupled with a desire to become a member of the target language community, are likely to learn the second language better than those with an instrumental motivation, i.e. learners who merely want to benefit from practical advantages of learning a second language, interests of better job prospects for instance.

Notwithstanding exceptional cases, Gardner (1979, 1985) argues that an integrative motivation is needed for successful language learning. He finds positive correlations between motivational factors and the achievement in French of English Canadians. In his study (Gardner and Lambert 1972:132), he expresses the difference between integrative and instrumental motivation in the following questionnaire items:

I am studying French because

a) I think it will someday be useful in getting a job (instrumental)

b) I think it will better help me to understand French people and their way of life (integrative)

Gardner observes positive relationships between components of the integrative motive and second language achievement measures. Ely (1986) also reports results substantiating the integrative/instrumental distinction first postulated by Gardner and Lambert.

However, a few objections have been raised with regard to Gardner and Lambert's view. Appel and Muysken (1987:93) argue that they give too much weight to the integrative motivation which might suggest that

> cultural assimilation or at least the adoption of the main cultural values of the target-language community is an important condition for successful second language acquisition.

Au (1988), on the other hand, questions the generalizability of the hypothesis when contextual considerations are taken into account. How is one to explain that a less integratively motivated second language learner can still emerge as a better learner in some contexts?

Despite such criticisms directed at instrumental/integrative distinctions, one still expects individuals who are integratively motivated to learn the language better than the others and to welcome opportunities and challenges to practise the language.

Contrary to this expectation, recent research in Turkey involving university-level populations and seeking to establish the primary reason why students opt for an English-medium education, suggests that more than 66% of the students think that such an education will be beneficial in securing financially rewarding employment (Kalfazade and et al. 1988). In other words, these data collected by instructors at Marmara University, Istanbul, clearly show that attitudes towards the use of English are guided by instrumental consideration. This does not come as a big surprise since it is extremely difficult to achieve integrative motivation in Turkey where there is very limited contact with native speakers. Unfortunately, this study does not provide empirical evidence on the impact of such instrumental motivation on students' second language progree and achievement.

Research is essential to understanding the links between motivation and second language acquisition bearing in mind that motivation is not the only factor involved in SLA and it does not account for all discrepancies in second language achievement (Gardner 1988). It is particularly crucial to gauge the influence of students' responses to teaching materials on second language development.

1.3 TYPES OF CONTENT-BASED SECOND LANGUAGE INSTRUCTION

In this section we shall describe three content-based models. Although they share

the basic objective of CBSLI, i.e., to enable the students to attain academic development along with high levels of functional proficiency in a second language, they differ in terms of the nature of learners and teachers, and the linguistic environment in which the programme is established.

The first model of CBSLI is *theme* or *topic-based language courses* which are structured around topics or themes students are likely to encounter in their general educational curriculum. The content material presented by the language teacher provides the basis for language analysis and practice. The ultimate purpose of the programme is to help students develop second language competence. In a theme-based model, the language instructor is generally responsible for language and content instruction. S/he selects the materials for the content lesson as well as materials for language teaching.

The second one is the *sheltered courses* model. These courses are designed to teach content in the second language to a segregated group of learners by a content area specialist who is a native speaker of the target language. Again, the purpose is to develop the second language skills of the participants and to help students learn the content of a regular university course. The programme is not run by a language department but by the department of the content course. In the sheltered model, it is the content instructor who has sole responsibility for content and language instruction. More detail on sheltered courses is given in Chapter 2.

The third model of CBSLI is the *adjunct* model in which "students are enrolled concurrently in two linked courses -a language course and a content course- with the idea being that the two courses share the content base and complement each other in terms of mutually coordinated assignments" (Brinton et al. 1989:16). By its nature, the two aims are given equal importance: it is neither all content nor all language but a mix of both designed to help students master both. In the adjunct model, content instructors assume the responsibility for content instruction while language instructors are responsible for

language instruction.

Whichever model of CBSLI is implemented, there is bound to be a number of implications to consider. These implications, varying from administrative issues to materials development, are of no small consequence for the success of the integration of second language instruction into the ongoing curriculum. Without a doubt success very much depends on long-term organization and planning as well as on financial support. Nevertheless, having recognized the significance of all the other factors involved, our own belief is that the general effectiveness of any language learning or teaching programme in any given setting is dependent to a large extent on the quality of teachers.

From the given characteristics of all three content-based models, an image of the ideal teacher, who is either bilingual or has the closest approximation to native speaker competence, emerges. If this ideal teacher is not available, advocates of CBSLI would require an intensive teacher-training course to be set up -despite administrative and financial restrictions in many settings- for content teachers to be made aware of the language-related difficulties students might encounter. They also argue that the load imposed on content teachers is likely to diminish by means of constant collaboration between content teacher and language teacher (Snow et al. 1989 and Brinton et al. 1989).

Sadly, for many teachers and learners these ideals never come to be realized. In developing countries, teaching mathematics or science through a foreign language poses an immense problem because money and basic facilities are in short supply, and so are bilingual teachers or teacher-training programmes as envisaged by theorists in Britain, the United States and Canada. Afolayan (1977) writing about the Nigerian situation, questions the assumption that every teacher is capable of learning a second language and of becoming so proficient in it that he can effectively impart it to others. He criticises the situation in Nigeria where teachers are ill-equipped and lack proficiency in in English to teach the language, and he attributes the low standard attained by pupils in English to the

indefensible and unrealistic expectation that teachers should cope with the wide range of subject matter he is supposed to teach in English.

Under such circumstances, as Afolayan points out, both the content teacher who is supposed to assume a dual role as content and language teacher but lacks the qualification of a language teacher, and the students will face a number of problems. There might be communication problems between teacher and learner when content is conveyed in, say, English which is foreign to both teacher and learner. Even if the teacher is an expert in his/her field, he/she may not be able to teach satisfactorily in English.

1.4 CONCLUSIONS

This chapter has attempted to give an evaluative account of content-based second language instruction by drawing on an extensive survey of the relevant literature.

The theoretical basis of CBSLI was broken down into three underlying hypotheses. The first one is that using a target language for content teaching influences second language achievement positively by creating meaningful contexts for communication. This assumption found wanting in many respects and it was not supported by empirical evidence.

The second one, the Input hypothesis, maintains that second language acquisition results from a sufficient amount of comprehensible input. As what constitutes 'comprehensible input' is not defined precisely, this hypothesis is based on shaky grounds. Moreover, other research has shown that in addition to input, learners should be provided opportunities to produce the target language.

The third hypothesis is that the integration of content and language teaching provides a motivational basis for second language achievement due to the relevance of content and of the materials used in the class to the needs and interests of the students.

Conflicting evidence exists in relation to this hypothesis. Therefore, it has yet to be convincingly demonstrated that second language achievement is causally affected by such an integrative approach.

To summarize, the claims that the content-based approach fulfills essential conditions for effective language teaching and for content mastery, do not seem to be substantiated by current literature in second language acquisition. Yet, we see that there is a persistent trend towards the integration of content and language in the field of language teaching. This may be attributed to the positive results Canadian immersion programmes have produced.

The next chapter will look specifically at these programmes and discuss the transferability of this approach to other settings.

CHAPTER 2

CONTENT-BASED SECOND LANGUAGE INSTRUCTION IN DIFFERENT SETTINGS NORTH AMERICA VS. THIRD WORLD COUNTRIES

2.1 INTRODUCTION

Canadian immersion programmes have long been an area of central interest for applied linguists and policy makers who are engaged in investigations into the advantages and disadvantages of using a second language as a medium of instruction. Convincing results obtained from rigorous evaluation surveys in Canada made the immersion approach attractive for educators in a number of countries.

The success of immersion programmes in Canada has also led Turkish educators, who were already searching for an alternative method to traditional language teaching methods, to argue for their use in Turkey. In their enthusiastic attempts to adopt this model in Turkey, Turkish scholars have paid little attention to the language situation and to the unique social, cultural and historical circumstances in which these programmes came about.

The point is that the choice of an instructional model should proceed from an accurate assessment of the language situation in which this particular model functions. As Mackey (1978:6) puts it:

> Before importing a model of bilingual education it is important to study its genesis. How did it develop and for whom? It is important to know not only what people did with it, but why they did it; not only that this model succeeded, but why it succeeded; not only that a certain model failed in a certain area but why it failed.

Here the argument is not that one-to-one similarities should exist between sociocultural and linguistic factors in Canada on the one hand and current educational realities in Turkey on the other hand, but rather that there should be an awareness of any discrepancies which may hinder the success of the immersion programmes in Turkey.

The intention in this chapter is to investigate the extent to which the socioeconomic, cultural, educational and political contexts in which the Canadian immersion programmes were formulated and implemented, are comparable to those found in Turkey. It is argued that Turkish educators have to guard against drawing hasty conclusions from a sample of middle-class children with high IQs taught by well-trained staff in a well-funded programme.

This chapter starts with a definition of the immersion approach. Followed by a two part analysis of the major features of immersion programmes. Part one examines the sociocultural, linguistic and pedagogical features of the Canadian immersion programmes and their implications for the Turkish context. Economic factors, from a quantitative perspective, have also been taken into consideration. Only then could the Turkish and North American models of immersion be properly compared with due consideration paid to their respective socio-cultural environments.

The second part presents the results of the Canadian French immersion programmes, with respect to English and French language development, to the academic achievement of participating students, and also to the social and psychological outcomes. In contradiction to the numerous evaluation studies carried out by immersion researchers in Canada, there have been no studies assessing the two decades or so of immersion experience in Turkey. This lack of research hinders any discussion on the efficacy of the immersion approach in the Turkish context.

This chapter will proceed with a discussion of immersion at university level with examples from Canada and the U.S. This will be followed by a discussion of the relationship between these programmes in North America and their Turkish counterparts.

And finally, we will deal with educational settings in the Phillipines and Tanzania in terms of the current language policies they have adopted. These countries have been chosen since they offer interesting parallels to language policies in Turkey.

2.2 WHAT IS THE IMMERSION APPROACH?

Immersion programmes provide a major example of experimentation with content-based language instruction. Contrary to what many educators or language planners or even policy-makers understand by the term immersion- some form of monolingual English programme where students are exposed to a great deal of English- immersion in fact is:

> a form of bilingual education in which students who speak the language of the majority of the population receive part of their instruction through the medium of a second language and part their first language. Both the second language and the first language are used to teach regular school subjects, such as mathematics, science or physical education in addition to language arts (Genesee 1987:1).

The major goals of immersion programmes are:

[1] To provide the participating students with functional competence in the second language;

[2] To promote and maintain normal levels of first language development;

[3] To ensure achievement in academic subjects commensurate with students' academic ability and grade level;

[4] To instill in the students an understanding of and appreciation for the target language group and their language and culture without detracting in any way from the students' identity with and appreciation for the home language and culture

(Genesee 1987:12-13).

The extent to which these desired goals of French immersion programmes have been achieved will be discussed in the following pages.

2.3 CANADIAN FRENCH IMMERSION PROGRAMMES

2.3.1 Sociocultural and Linguistic Features and Implications for the Turkish Context

This section focuses on Canada and particularly on Quebec since the first immersion programmes originated in Quebec in the 1960s. Thus, this section will begin by placing immersion programmes into their historical perspective in order to help our understanding of the underlying conditions which contributed to their success.

Canada, though it is counted as a bilingual country, with French and English as (dual) official languages, is an example of a multilingual and industrialized country in which linguistic diversity continues to cause considerable concern as an issue of national division. This concern permeated the recent debate over Quebec's possible secession. The crux of the matter was the so-called Meech Lake accord, a package of constitutional amendments, which expired on June 23 1990. Its purpose was to bring Quebec under the umbrella of the 1982 constitution which Quebec refused to sign. Now, as Nelan (1990) puts it, "Quebec remains outside the 1982 constitution. It must now decide where it wants to go: to full independence, to sovereignty inside an economic union or simply to a further loosening of Canada's confederation."

Quebecers have historically feared for their linguistic and cultural survival on a continent dominated by English speakers. Many have wanted to preserve and promote Quebec's unique status as a distinct society in Canada, based on the fact that the province is the only one with a French-speaking majority. The first major change in the official language policy of Canada was the British North American Act (BNA) 1867, which

legally confirmed Canada's linguistic duality. The BNA act, on paper, gave Quebec protection over the use of the French language, and the maintenance of its educational system and civil law, all of which aimed to contribute to the preservation of French-Canadian culture.

In practice, however, the BNA failed to resolve conflicts over the issue of cultural and linguistic differences. In the 1950s, many Francophone Quebecois became increasingly aware that, compared with some other provinces, they were disadvantaged and that linguistic and cultural inequities were still going on. More precisely

> In the late 1950s it became apparent that 'traditional' French Canadian social patterns were rapidly breaking down. Industrialization brought about the decline of the rural community, and contacts between French and English were becoming more numerous as French Canadians attempted to compete in an urban industrial setting long dominated by the English and for which they had been ill-prepared by their schools and institutions (D'Anglejan 1984:29).

With the election of a reformist liberal government in the province in 1960, this social unrest led to the emergence of the Quebec separatist movement which later came to be called the Quiet Revolution. D'Anglejan (1984:29) defines this movement as "an attempt to accelerate the socio-economic development of French Canadian society to bring it into line with that of the rest of Canada." Bill 101, the language legislation enacted in 1977, was the outcome of this great pressure from the Quebec francophone nationalist movement. The survival of the French language in Quebec was guaranteed by Bill 101 which made Quebec both institutionally and socially a unilingual French state.

Following the declaration of Bill 101, in the space of less than a decade, the satus of French as a language of work improved and its place in Quebec society has been strengthened (Laporte 1984).

It was against this background that the St. Lambert experiment in early total immersion took place in Montreal in 1965. It was the changing status of French to a language of

work and education which led Anglophone parents to move from a majority mentality to a minority position. These Anglophone parents, wanting to secure the future of their children in a community in which French was rapidly gaining in importance in all domains of social life, realized the need to adapt to the new situation. They were also aware that the traditional approaches to language teaching would not be sufficient to meet their children's needs and that a new approach with quick results was needed. However, it is important to note here that in addition to the linguistic concerns of the parents, an increasing dissatisfaction with the widening social gap between French and English communities in Quebec played a major role in making Anglophone parents search for a solution.

> it was in the educational system, and in French immersion in particular, that the St.Lambert parents sought a response to the important sociolinguistic changes that were taking place around them. ... improved French second language learning was not intended to be the sole goal of immersion. Rather it was intended to be an intermediate goal leading to improved relationships between English and French Quebecers and thus ultimately to a breaking down of the two solitudes (Genesee 1987:11).

Consequently, the first experiment began with a kindergarten classroom of English-speaking children who were instructed entirely through French by a French-speaking teacher. Following the establishment of the first immersion programme, annual evaluation studies were conducted to assess the effectiveness and success of the programme. On the strength of positive findings, immersion programmes have expanded to all provinces of Canada and to several regions of the United States providing an alternative to traditional language instruction. Reports of the success of Canadian immersion programmes, early total immersion in particular, have also led educators in other countries, including Turkey, to adopt the same model. However, the background characteristics of these programmes such as parental pressure and the concern over the sociocultural future of Canada should be borne in mind when considering their potential in another setting.

Immersion programmes have been designed and implemented under specific educational and sociocultural conditions. Genesee (1987:18-9) summarizes these conditions in the following manner:

[1]   The participating children speak the majority group language.

[2]   Educational, teaching, and administrative personnel working in immersion programmes value and support, directly or indirectly, the children's home language and culture.

[3]   The participating children similarly value their home language and culture and do not wish to forsake either.

[4]   The children and school personnel regard the acquisition of the second language as a positive addition to the child's repertoire of skills.

[5]   The children's parents wish to maintain the home language and culture while valuing their children's acquisition of the second language.

According to this list, Canadian immersion programmes mainly seem to be designed for homogeneous populations who appreciate the advantages of bilingualism provided their own language is maintained and developed alongside the second language.

This condition that participating students should be from the majority language group and a policy of additive bilingualism should be aimed at in immersion programmes, is emphasized repeatedly by the immersion researchers. They argue that only in this way, i.e. by enrolling students from the majority language group in the programmes, can the ongoing development of the students' first language be guaranteed. For instance Wesche (1984) sees societal support which a child needs for his/her first language development, as a prerequisite for the implementation of immersion programmes.

The encouraging results of U.S. immersion programmes for majority language speakers, essentially supports this principle. The findings of the Culver City project, for example, in which the objectives and features of the original St.Lambert experiment were followed, replicated those of Canadian programmes. The students were able to reach a high level of proficiency in their second language, Spanish in this case, and in addition their academic achievements were unaffected. They even performed better than their peers who followed an English-only curriculum (Champbell 1984).

Unlike majority language speaking students whose first language is supported and valued by the community outside the classroom, minority language students find themselves in submersion programmes where their first language is considered to be a major contributing factor in their educational failure in mainstream courses. In these programmes, as Hernandez-Chavez puts it, they are simply "schooled with no recognition of differences in language and culture, except as impediments to learning and as a burden to the efficiency of the school" (1984:146). And because these sociocultural, linguistic and educational differences between majority and minority group students are not taken into consideration, attempts to implement the same enrichment model as instanced in the U.S. and Canada have failed to produce the positive results which the other programmes did.

Hernandez-Chavez (1984:168) has pointed out these important differences between minority and majority language students. His remarks urging caution with immersion programmes, or rather submersion programmes for minority language students are worth quoting at length:

> For majority language students enrichment education is aligned with the Canadian cultural and social condition. It is unreasonable in the extreme to expect the Canadian enrichment model to be directly transferable to language minority contexts in the United States. This model is appropriate and effective in Quebec, and now in other parts of Canada, because the program was designed under specific educational conditions by and for a middle class majority population and with the guidance of dedicated researchers backed by sound psycholinguistic theories. The Canadian enrichment model is not appropriate for language minority children in the United States because the requisite

sociopolitical, sociolinguistic, and educational conditions for the successful conduct of an enrichment program are completely different.

At this point, it is also worth mentioning that Francophone educators have not chosen the immersion route in the teaching of English as a second language in Francophone schools. In Quebec immersion is seen as an instrument of assimilation. It is argued that "there is no question of adopting an English immersion programme in the Francophone schools, at least in the sense of the French immersion model in Anglophone schools, because it arouses the fear of loss of French and English assimilation of Francophones" (Edward 1984:43). And this despite the fact that Francophones are in a majority and that French remains a prestigious world language.

Thus, it is not unreasonable to suggest that the successes of French immersion programmes are attributable to a large extent to (1) the sociopolitical position of the English-Canadian group (2) the status of the languages involved in the programme, i.e. the status of the first language with respect to the second language, because language enrichment programmes presume a first language which is prestigious and socioculturally strong, and (3) educational conditions which will be discussed in the next section. But first we will look at the implications of these sociocultural and linguistic features for the Turkish context.

For certain unilingual or multilingual speech communities, learning a second language is of particular importance, since the second language is seen as essential both in international relations and at home as the medium of instruction in schools. In many countries of the Third World, language decisions -choosing a standard language or a language of wide communication for educational purposes- may be vital issues for national development. The main consideration in these countries is the acquisition of technological skills for economic development. Thus, the knowledge of a major world language is often considered as a prerequisite for scientific and technological advance-

ment.

Similarly, as an underdeveloped country, the Turkish motivation for learning English derives from an obvious admiration for Western scientific and technological achievements. The reliance on a language of wider communication (LWC), i.e. English, is justified by the view that it is only through a Western language national and individual well-being in the modern world will be realized. In Turkey, second/foreign language teaching is shaped by this perception and reports of the successes of immersion programmes have permitted the advocates of a LWC for educational purposes to adopt this model in Turkey. Instead of first identifying which aspects of the immersion approach are appropriate for the economic, cultural, political and administrative circumstances of Turkey, they opted for implementing immersion-like programmes. They simply paid no attention to the fact that the "language education problems of Europe are not those of Africa, and those of Asia are not those of America" (Mackey 1978:11).

Are there any similarities between Canadian and Turkish contexts?

It is true that one can find some superficial similarities between the Canadian and Turkish contexts. First of all, Turkish students are members of the majority group in society and they use their first language outside the classroom. However, as far as the status of languages are concerned, unlike the status of English in Canada or in the U.S. and the prestige it enjoys in all domains of social life, the Turkish language is claimed to lack the potential for being a language of instruction. Just like languages with minority status such as Spanish in the U.S. or Greek in Germany, Turkish is seen as a barrier to upward mobility both at individual and national level.

The point is that when it comes to deciding which language best suits a specific context as a medium of instruction, it is not sufficient merely to state that the first language of the students should be the language of the majority. It is equally important to consider

the relative status of the second language. In terms of relative status and prestige there is little comparison between the English/French and Turkish/English languages. To achieve education that is truly bilingual requires the recognition of both languages as worthwhile mediums. When one language is perceived to have educational potential while the home language is regarded as a hindrance, enrichment bilingualism is not likely to occur.

Thus the argument that since Turkish is the home language of the majority no negative affect is likely to impede the development of Turkish if English is used as the medium of instruction, is simply not valid. If, as Mackey says, "to replace a self-sufficient home language like English by a slightly less self-sufficient language like French, as has been done in the Montreal programs, is not really very much of a gamble" (1978:7), to immerse Turkish students in English certainly is.

Another feature common to both Canadian and Turkish contexts is the presence of parental pressure. In Canada parental pressure is directed to encouraging children to learn the second language mainly for integrative purposes, whereas in Turkey it is only for instrumental purposes. Another difference is that being the initiators of the first immersion programmes, Canadian parents have a substantial say in determining goals, curriculum, and staffing policies. They also monitor the quality of the immersion programmes in order to ensure first language and cultural maintenance. In contrast, Turkish parents have no control over resources and no right to intervene in school policies. They are not even informed of the possible detrimental effects on their childrens' first language development or warned that their academic achievement might suffer as a result.

Consequently, we see no reason why the cautionary remarks put forward by Hernandez-Chavez against the immersion approach for minority students should not be considered relevant in the Turkish context.

The language of home and family is a central aspect of sociocultural identity and self-esteem. If this language is stigmatized in society and repudiated by the school, an individual's self-esteem must necessarily suffer. If this language fails to be used as the primary vehicle for social, affective and cognitive development, these aspects of the child's growth will be damaged, bringing great harm to the child's educational potential (1984:171).

2.3.2 Pedagogical Features and Implications for the Turkish context:

The major pedagogical assumptions on which French immersion programmes are based are that (1) language learning occurs through interaction in meaningful contexts without a deliberate focus on the conscious learning of second language per se; (2) similar conditions to those in which a child acquires his/her first language should be provided for second language learners. Thus, in an immersion programme

the language learner is put in a position which has much in common with L1 acquisition, with learning a L2 in a natural environment. The program is not so much linguistically arranged, as it is ordered in terms of regular classroom activities and the school curriculum (Stern 1984:58).

However, the validity of the notion of creating a natural environment for immersion students has been questioned by a number of scholars. They are rightly doubtful about the extent to which a classroom can be turned into a natural setting approximating first language acquisition as suggested by advocates of immersion programmes. For instance Hammerly states that:

When we think of immersion -for example, of an object immersed in water- we think of that object as being surrounded by water. ... The sociolinguistically natural environment of second language acquisition involves being surrounded by older native speakers or native language-speaking peers. This does not happen and cannot happen in the second or foreign language classroom. Instead, there is one native speaker, and each learner is surrounded by, and interacts with, thirty other learners who misuse the target language just as badly as he or she does (1987:398).

This cogent objection by Hammerly should cause educators to pause and think again: if this so-called natural environment is not re-created in Canadian immersion programmes, how can one expect to re-create it in Turkey where even the availability of one

native speaking teacher in the classroom is strictly limited? Evidently, as Hammerly points out, there is nothing natural about learning another language within four classroom walls.

Another pedagogical condition which must be met in immersion classrooms is that students should constantly be encouraged to communicate in the second language. Teachers do not overcorrect the children's use of language since research on first language acquisition indicate that parents do not tend to correct their children's language for grammatical and structural inaccuracies. Thus, the focus of immersion teachers is as Swain and Lapkin explain, "on conveying the content to their students and on responding to the content of what their students are saying, no matter how they are saying it, or in which language it is being said" (1982:6).

However, this statement raises the question of whether such emphasis on communication, disregarding the form in which it is carried out, does not actually result in linguistic incompetence (this point will be discussed in section 3.4). Nevertheless, the importance of developing a thorough foundation in the structure of the language should be stressed here. Hammerly (1987:399) considers emphasis on communication at the expense of structural accuracy as the most serious problem with immersion programmes. He argues that in immersion programmes:

> as soon as students realize that they can manage to convey their ideas and that
> is acceptable to do so in faulty language -they are *congratulated* when doing
> so- they lose motivation (which young children lack) to become *accurate*
> speakers.

He describes the output of French immersion students as linguistically faulty. This linguistic phenomenon, he says, because it cannot be called a language, is "a very defective and probably terminal classroom pidgin, 'Frenglish'" (1987:397).

These negative views taken by a number of applied linguists with respect to

overemphasizing meaning in immersion classrooms have led immersion researchers to reconsider the priority given to the transfer of meaning at the expense of grammatical accuracy. Classroom surveys -previously neglected by immersion researchers- and notably a recent survey by Harley et al. (1990) suggest that there should be more emphasis on an analytic strategy in immersion teaching, that "the analytic focus and the experiential focus may be complementary, and that they may provide essential support for one another in the L2 classroom" (p.77). From the evidence available from these observation studies, they acknowledge that:

> whereas an overemphasis on the teaching of grammar may lead to certain undesirable effects, such as lack of transfer from organized practice to language use in real life settings, it is possible that typical content teaching -focusing exclusively on the message rather than the code- also fails to provide the most favorable conditions for second language acquisition (p.74).

They recommended that a right balance between experiential and analytic activities -between communicative and grammar-oriented teaching- should be maintained in the classroom.

Another central feature of immersion programmes that should be borne in mind before importing this model to other settings, is that immersion teachers are required to have native or native-like competence in the language of instruction. Even in Canada where in-service training programmes are available for teachers, it is an ongoing concern to find teachers trained specifically for the immersion context. Since particularly in the later grades, teachers are required to have subject-matter expertise in addition to competence in the medium of instruction, teacher selection and training for immersion programmes pose serious problems.

When compared to Canada's, staffing concerns are even more dramatic in Turkey. As pointed out in the previous chapter, teachers of subject-matter courses, in most cases anyway, are not native speakers of the language, English, and naturally enough their

proficiency is not adequate to teach the subject-matter in English.

To summarize, as far as the sociocultural and pedagogical conditions of the immersion programmes are concerned, Turkish and Canadian context differ substantially in terms of (1)the status and prestige of the languages used in education, (2)incentives to learn a second language; in Canada it is, to a large extent, for integrative purposes whereas in Turkey it is only for instrumental purposes and (3) differences such as the proficiency level of teachers, limited use of L2 in the classroom, and classroom size etc.

2.3.3 Economic Considerations:

It goes without saying that the state of the economy impinges on the allocation of resources for educational purposes. Implementing new language teaching programmes is a costly affair if it is to be done properly.

Given Canada's current economic and political position as one of the G7 countries, it may be assumed that even without going into detailed statistics, Canada's superiority over Turkey in terms of economic growth and financial resources is more than evident. For example, in Canada GNP reached 587.2 billion dollars in 1991 whereas in Turkey it was only 107.3 billion dollars. As a result of this wide gap between two countries, per capita income in Turkey is as low as 1432 US$ while it is over 15,000 US$ in Canada.

Given the GNP and per capita differences between the two countries, the resources available for good immersion programmes are simply not comparable.

2.3.4 Variants of Canadian Immersion Programmes:

Apart from the St.Lambert experiment which set an example for other immersion programmes throughout Canada, the U.S. and other countries, alternative forms of immersion have also been implemented. These variant immersion programmes are gen-

erally classified as **early total** or **partial, delayed** and **late immersion.** One of the distinguishing features of these programmes is the grade level at which the second language is introduced as the medium of instruction. They also differ with respect to the amount of instruction time offered in the second language, or the number of years during which students are exposed to the second language as the medium of instruction (see Genesee 1987; Swain and Lapkin 1982).

Lapkin and Cummins (1984:60) present a schematic summary of alternative immersion programmes:

TABLE 2.1		
A DESCRIPTION OF SOME IMMERSION PROGRAM ALTERNATIVES		
Kind of immersion program	Starting grade	Percentage of time in French lang. in first year
Early total	Kindergarten/1st grade	100
Early partial	Kindergarten/1st grade	50
Delayed/Middle Late	4th/5th grade	50 to 100

2.4 RESULTS OF THE CANADIAN FRENCH IMMERSION PROGRAMMES

The many evaluation studies that have accompanied French immersion programmes, early total in particular, have demonstrated the linguistic and academic effectiveness of these programmes. The method used in these studies was until recently to compare the performance of the children in the immersion programme with that of control students attending regular English medium programmes. The tests used in these studies generally consist of standardized tests of subject achievement, of first and second language development and attitude tests which measure the social and psychological effects of immersion programmes.

In this section the findings of these evaluation studies will be summarized since they were extensively presented elsewhere (see Swain and Lapkin 1982 and also Genesee 1983, 1987). The results will be discussed with respect to English and French language development, to academic achievement and also to the social and psychological aspects of immersion programmes.

2.4.1 French Language Skills

The French language skills of immersion children have been assessed through longitudinal studies. The results show that the receptive skills (French listening and reading comprehension) of the immersion students appear to develop as well as (but not better than) French control students, which is not very surprising given the great amount of exposure to the language and the emphasis on comprehension skills before productive skills. They do less well in productive skills although they are able to convey the meaning of what they want to say. Over the years, certain scholars have become more concerned about the productive skills, -speaking and writing-, and have concluded that immersion students are far from linguistically competent. For instance, Harley and Swain (1977) in their detailed analysis of immersion students' use of verbs, found that children opted for a simpler and grammatically less redundant French verb system than do native speakers of the same age. They tended to operate on forms which are grammatically less complex and used generalized forms of the French verb (e.g. the first conjugation -er verb pattern).

Spilka (1976) also conducted research based on recordings of the stories retold in French by children in immersion programmes. The spontaneous speech of grade five and six students was elicited after showing them a 20-minute silent film, each student being asked to retell the story in French to another student who had not seen the film. These stories were recorded and analyzed. The results were then compared with those from grades one to four immersion which had had the same treatment, and with a class of

French- speaking children of the same age. Spilka found that grade six students had an error percentage of incorrect sentences of 52.2 percent whereas Francophone children's percentage was less than seven percent (6.19). The research also indicated no apparent progress in immersion students' second language proficiency between grade one and grade six as far as the grammatical accuracy of their second language performance was concerned.

The Pellerin and Hammerly study (1986)[2] shows that most aspects of structure used by immersion students contained errors. The results were obtained by interviewing six Vancouver, BC, area grade twelve students who were instructed in French for nearly thirteen years. These interviews, during which volunteer subjects were asked questions on topics very familiar to them, were recorded. The recordings were then transcribed and analyzed. Pellerin and Hammerly found that "the mean number of sentences containing one or more grammatical or lexical errors was 53.8 percent" (Hammerly 1987:397). Their research also revealed that statements produced by the subjects were short and simple. Their language was repetitive with frequent false starts, circumlocutions, omissions, and so forth. Pellerin and Hammerly concluded that contrary to what advocates of immersion programmes claim, the kind of language students managed to communicate their ideas even with difficulty, was not French, but was 'Frenglish' (Hammerly 1987:397). As to the reliability of results derived from such a small scale study, the authors argued that:

1. The subjects were volunteers, and the worst students in a class were unlikely to have volunteered.

2. The students were from two programs with competent teachers and an excellent reputation, one of which programs had been the model for other immersion programs in British Colombia.

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[2] As this study is published in French and not available in English, results reported here are based on Hammerly's 1987 article.

3. While all the students were linguistically weak, a wide range in competence can be seen.

They concluded that analyses of grammatical errors made by French immersion students showed that their linguistic output was poor (Hammerly 1987:397)

Adiv's (1980) interviews with children in grades one, two and three in French and French-Hebrew immersion programmes also showed that students had a tendency to use simplified grammatical structures. She attributed this result to constant pressure to communicate freely (Hammerly 1987).

Tatto (1983) showed that despite having been instructed in French for 5.300 hours, the written grammaticality of early French immersion students was not significantly better than that of students with less than 500 hours of regular French classes.

From the evidence available, it may be claimed that students in French immersion programmes, even after six or seven years of instruction in the second language, fail "to have language skills similar, equivalent or comparable to the competence of Francophones of the same age" (Bibeau 1984:45). Perhaps it is time to consider the question of whether these programmes have been praised uncritically and claims of success have been exaggerated.

2.4.2 English Language Skills

Most studies report an initial lag in the first language skills of immersion students. However, there seems to be a quick recovery once English is introduced as a subject matter. For instance Barik and Swain (1975) found in a large scale study over 1000 English speaking children in early total immersion programmes in Ottawa that immersion children were behind control English speaking children in English language skills at the end of the first grade. At the end of grade two, they reported that differences in

English language skills between the two groups had disappeared.

Swain and Lapkin (1982) do not find these results suprising because of the extensive exposure to French in the early grades and because of the late introduction to English. They attribute the good performance of immersion children in English language skills from grade five on to the transfer of language skills acquired in French to their first language. This supports Cummins's linguistic interdependence hypothesis (Cummins and Swain 1986) in which he postulates that there is a common proficiency underlying bilinguals' command of literary skills in the two languages.

2.4.3 Academic Achievement

Immersion students have also been tested consistently in mathematics and science to see if they are also able to keep up with students taught in their first language. Tests of early total immersion students over a nine year period show that immersion students perform as well as or better than the members of English-instructed comparison groups (Swain and Lapkin 1982). Similar findings have been obtained in other studies of children in early total programmes (Barik and Swain 1975).

In later grades, however, studies revealed that the differences between immersion children and control groups are not statistically significant (Bruck et al. 1974). Which seems to indicate that immersion programmes have neither beneficial nor harmful effects on the academic achievement of children.

2.4.4 Social and Psychological Considerations

As was emphasized earlier, immersion programmes in Canadian settings were based as much on social and psychological considerations as on linguistic or educational ones. Non-linguistic benefits such as "favourable attitudes toward the other cultural community, a general appreciation of other cultures etc." (Gardner 1979:199) are indeed major

objectives in Canadian immersion programmes.

Numerous investigations have been conducted to assess the nature of such non-linguistic benefits accruing from proficiency in a second language. The first such investigation and the most extensive one was carried out by Lambert and Tucker (1972). In their longitudinal evaluation of the St.Lambert early immersion programme, English and French Canadian children from kindergarten to grade five were asked to rate themselves on 13 bipolar adjectives such as friendly-unfriendly. The results indicated that in grades one and two, immersion students expressed attitudes toward French Canadians that were more positive than those of the English speaking controls. In the later grades, however, relatively few differences were found between the attitude profiles of immersion students and English Canadians.

Genesee et al. (1989) also found that students in grades one and two French immersion classes tended to identify more with both French Canadians and people from France than did English controls. No such differences were obtained with students in grades three to five. Genesee (1987:114) explain this shift as a result of the absence of sustained social contact with French Canadians.

In general, then, the findings of social and psychological evaluation studies show that

> in the first year or two of the immersion program, the attitudes of the immersion students may be more positive towards French-Canadians than those of the English comparison groups. However, in later years of the program, the immersion students fail to express significantly more positive attitudes than non-immersion students. Nevertheless, in no case have the attitudes of immersion students towards French-Canadians been less favourable than those of their English-educated comparison group (Swain and Lapkin 1982:76)

But how about immersion programmes at university level? Proponents of CBSLI claim that the success of immersion can be replicated with older learners at universities, that second language proficiency can be developed through the teaching of academic

subject matter in the second language as it is at the elementary and secondary levels.

2.5 IMMERSION AND THE UNIVERSITIES

Although evaluation tests do not conclusively establish the superiority of immersion programmes, especially in terms of the grammatical accuracy of students' second language output, the immersion approach is still considered to be an effective means of developing proficiency in a second language as well as in the subject matter. It has recently been adopted by some universities and University immersion programmes have begun to attract professional and academic attention.

A possible explanation for this belated interest in immersion programmes at university level might be the common belief among many researchers as well as educators that children are much better learners of a second language than adults are; that the sooner children begin immersion, the better. Nevertheless, there is an observable shift in research investigating the effect of the age factor on second language proficiency. They indicate that contrary to previous belief and evidence older learners may actually progress more rapidly than children.

According to Krashen et al. (1979:574) "adults and older children in general initially acquire the second language faster than young children (older-is-better for rate of acquisition)", but he recognizes that "child second language acquirers will usually be superior in terms of ultimate attainment (younger-is-better in the long run)".

Recent research into Canadian immersion programmes support the view that older learners may be better. Genesee (1985), for instance, reports that

> students attending 2-year late immersion programs achieve the same level of proficiency in all aspects of French as do students who have attended early total immersion programs, despite the fact that the former had considerably less exposure to French -approximately 1400 hours compared to 5000 hours by the end of grade 8 (p.558-9).

Swain and Lapkin (1989) agree that older learners exhibit as much success in learn-
ing certain aspects of a second language as younger learners do. And they achieve this in
less time than it takes child second language learners. Swain and Lapkin cite the research
results obtained from comparative studies between early and late Canadian immersion
students at the end of secondary school.

> Tests of French proficiency in reading, writing, speaking, and listening reveal
> surprisingly few differences at the end of high school. Early immersion stu-
> dents tend to perform better than late ones on listening and speaking tests
> (although differences are not always statistically significant), but not on
> literary-related tests (p.151).

There is an ongoing debate as to why older learners achieve higher levels of second
language proficiency than younger students even when given as much or even less expo-
sure to the second language. Older learner's superior cognitive development and positive
transfer from a well-developed first language are considered to be the two major contri-
buting factors (Genesee et al. 1989). Swain and Lapkin (1989:152) also attribute this to
older learners' cognitive maturity because adult learners

> are better able to abstract, to generalize, and to classify from the beginning of
> their second language learning experience. ... they are able to reflect on their
> own language and to attend consciously to language per se.

These assumptions are very much in parallel with what Cummins posits in his inter-
dependence hypothesis. In this hypothesis Cummins suggests that L1 and L2 academic
proficiencies are developmentally interdependent, i.e., in educational contexts, the
development of L2 proficiency is partially dependent upon the prior level of development
of L1 proficiency (Cummins 1984). Thus, a high level of proficiency in the first language
makes possible a similar level of proficiency in the second language. On the other hand,
when cognitive and linguistic skills in the first language are not well-established, and
second language is used as a medium of instruction in the early years, further develop-
ment in the first language will be delayed.

Cummins, later on, reformulated this hypothesis in terms of 'common underlying proficiency.' He suggested that literacy-related skills can be transferred from one language to the other. For example, reading lessons in Spanish for Spanish-speaking students also contribute to the development of their English reading skills, because they develop their common underlying proficiency (Cummins 1984:143).

According to Cummins, an individual who has a well-developed first language also has at his/her command important cognitive and language learning strategies which will facilitate the acquisition of academic and literacy-related skills in the second language.

2.5.1 Results of Immersion Programmes at University Level:

On the basis of the recent conclusions drawn from comparisons between early and late immersion teaching, subject-matter teaching through a second language at university level seems more plausible to the CBSLI researchers than before. The general belief is that since even high school students prove to be better learners compared to their younger counterparts, students at university level, with their greater cognitive and linguistic development, stand a better chance in developing high levels of language proficiency.

In the following section a few immersion programmes at university level will be discussed.

2.5.1.1 Sheltered Immersion at the University of Ottawa

First of all, what does sheltered mean? It refers to "a classroom set-up where second language learners are separated or segregated from native speakers of the target language for purposes of language instruction and often for selected content subjects. In this way instruction can be geared to the students' level of proficiency as accommodation is made to maximize comprehension" (Snow 1987:9).

At the University of Ottawa, which is known as Canada's largest bilingual university, groups of Anglophone and Francophone students take the 'Introduction to Psychology' course in their second language. The special features of this programme can be outlined in the following way:

1. The course is taught by regular psychology professors whose main emphasis in the class is on making the content comprehensible through a variety of both planned and spontaneous adjustments.

2. Each lecture is attended by a second language teacher who then provides approximately 20 minutes of instruction going over course materials to ensure that students understand course lectures and readings. Here is how Hauptman et al. (1988:445-46) describe the role of language teachers in this programme:

> the language teacher gave no explicit grammar instruction but rather worked with students in developing strategies for effective reading and class interventions, provided reviews or anticipatory overviews of important points in the readings and lectures, and responded to language problems raised by the students.

3. In both sections, French and English, the same textbook is used and a Study Guide which outlines the course format and curriculum is followed. Additionally, standard bilingual multiple-choice final examinations are taken by all students, thus making comparative research on the effectiveness of this programme possible.

4. In order to be admitted to sheltered psychology course, students have to have a high-intermediate level of second language proficiency in the language of instruction. Their proficiency is measured by the university's English Proficiency Test or Test de compétence en Français.

Research Findings

A comparative study between experimental subjects who took the second half of a two-semester Introduction to Psychology course in their second language, and control

students who took the same course in their native language was conducted. Three research questions were dealt with in this study (Edwards et al. 1984):

1. Did the students master the psychology subject-matter as well as students in the first language sections taught by the same professor?

2. Was there any measurable French or English proficiency improvement in their second language?

3. Did they gain self-confidence in using their second language outside the classroom?

Results of extensive pre-testing and post-testing showed no difference in terms of academic achievement. Students in the sheltered courses performed comparably on the psychology final exam and course grade to the grade they had in a first-language section during the first semester. As for language, experimental subjects made significant second language proficiency gains comparable to gains by the control group students. Finally, students in the sheltered courses reported a significant improvement in their own perception of their second language proficiency and a decrease in their anxiety about using the second language outside the classroom.

In another study Hauptman et al. (1988) report the results of research on subject-matter language teaching at Ottawa University. The findings provide positive answers to the first two research questions: Did the students learn psychology? and Did the students improve their second language skills? Students in the sheltered groups mastered psychology and also made remarkable gains in second language proficiency. As for the third question: Did their self-confidence increase?, results do not indicate a definitive answer. However, Hauptman et al. (1988) report a positive attitude change developed by students in the sheltered programmes towards their language skills.

2.5.1.2 The Adjunct Model at the University of California at Los Angeles

Another academically oriented project focusing on content and language has been

implemented at the University of California, Los Angeles (UCLA). In an adjunct pro-gramme, "students are enrolled concurrently in two linked courses -a language course and a content course- with the idea that the two courses share the content base and com-plement each other in terms of mutually coordinated assignments" (Brinton et al. 1989:16). Although sheltered immersion and adjunct models share the basic goal of teaching both content and second language skills, they differ in several important ways.

In terms of student population and environment, students on the UCLA Adjunct programme are both non-native and native speakers of English in a predominantly English speaking environment. The idea is that since both groups attend the same content course taught by a native speaker, non-native speakers of English will have opportunities to interact with native speaker peers, they will be exposed to authentic input rather than modified input.

The second difference is that unlike in the sheltered model where the content instructor assumes sole responsibility for content and language instruction, in the adjunct model the roles and responsibilities of content and language teachers are kept separate. However, close coordination between the two is imperative. Language instructors must attend content lectures in order to be familiar with content materials and also develop new language teaching materials based on the content (Brinton et al. 1989). Thus, ESL and content teachers meet weekly to discuss materials, assignments and problems.

Several studies were undertaken to assess the effectiveness of the UCLA Adjunct programme. The results indicate that the integration of content and language provides students with the academic language skills required for success at the university.

2.5.1.3 Immersion in Turkish Universities

Despite the ongoing debate on the merits of CBSLI and an absence of any empirical

research endorsing the effectiveness and applicability of CBSLI to the demands and conditions of the Turkish educational system, there has been a dramatic increase in the number of English-medium institutions. The number of universities using English as the medium of instruction has recently risen to four (out of 29).

As with immersion programmes at the University of Ottawa and UCLA, the main purpose of immersion programmes in Turkish universities is to enable students both to learn the content and to develop English language skills. However, there are some stark differences between the ways this aim is pursued in Turkey and in North America.

First of all, neither learners nor teachers are native speakers of the target language. Nor do they work alongside native speakers of it. Nor do they have a target language environment. Therefore, it is not possible to talk about "authentic input" as in UCLA or "modified input" as in Ottawa. What we see in a typical classroom in Turkish universities is a Turkish professor addressing a Turkish-speaking audience in a foreign language. Interacting with English native-speaker peers within or without the classroom is out of question simply because there is no native-speaker to interact with.

Secondly, whereas in North America there is close coordination between content and language departments, with weekly meetings between content and language teachers at UCLA, no such cooperation exists in English-medium universities in Turkey. When teachers at Middle East Technical University (METU) in Ankara, where the field study was undertaken, were asked in the questionnaire whether there is any cooperation between departments, most of them answered "definitely not".

Thirdly, perhaps most importantly, at METU and in other English-medium universities in Turkey, there is only one instructor, the content instructor. Students do not have the opportunity to review the content course with a language teacher, to ask for help when they have language problems. Both students and content teachers are left to their

own devices with immersion programmes.

Another point we wish to make here is that, again in contradiction to the two immersion models we briefly described, no formal research has been conducted to assess the effectiveness of the model, if one can call it a model, in Turkey. All we have are assumptions and claims that a foreign language is more effectively learnt when it is the medium of instruction than when content and language skills are taught separately.

2.6 OTHER SETTINGS

We would like to present brief information about the role of language in education in two other settings -the Philippines and Tanzania. We have chosen these countries because they offer interesting parallels in terms of the way each country deals with the role of English. We think it is useful to consider the situation in Turkey in the light of information about practices in these settings.

2.6.1 The Philippines Experience:

The Philippines is a multilingual country. In addition to 70 different languages, there are dialects used in some regions. The major dialects are Tagalog, Cebuano and Ilo-cano. The lack of a common national language is the reason why an all-English educa-tional system was mooted. Its advocates argued that since none of the dialects -with one exception, Tagalog-, are developed enough to meet the needs of the whole population, English should be the medium.

This idea has been put into practice after the American invasion of Philippine islands. The Americans, from the very beginning of their occupation, claimed that they aimed at expanding the public school system, and that this could only be achieved through using English as the medium of instruction. So, they set out to educate an entire nation in a completely foreign language. American teachers and textbooks in English

were sent from the United States. The use of the home language in schools was forbidden for the sake of teaching English more effectively. Thus, in a very short period of time English became the common language of educated Filipinos. The affairs of government and business came to be conducted in English.

After independence, however, Tagolog-based Pilipino has risen to a position of dominance among the other native tongues as a result of a rise in Philippine nationalism. It is being taught systematically in all the schools. And since 1974, under a bilingual educational policy, English and Pilipino have been used as the media of instruction, English for science, mathematics and English literature and language subjects, and Pilipino for all the other academic subjects.

This bilingual policy was revised in 1987 with a view to expanding the domains of Pilipino. This yielding of ground by English is clearly seen in elemantary and secondary education, where Pilipino is now used as medium for at least half of the subjects. However, this policy has not been fully implemented at the tertiary level due to the scarcity of materials in Pilipino, and to the lack of teacher proficiency in Pilipino as a medium of instruction.

In today's educational system, English is still used at most graduate and undergraduate levels. Graduates in medicine, law and business management have to be competent in English since all the professional examinations including National College Entrance Examination are in English.

As Pascasio (1988:114-5) explains, the use of English is not confined to education only. "In government, the formal sessions in the Senate and the House of Representatives are conducted mostly in English. The laws and bills are written in English. Present constitution is written in English with a Filipino translation. In the courts of law, judges and lawyers conduct their trials in English. There is always a translator. The transcripts

are also written in English."

Pascasio (1988) also reports a study on classroom language use which shows that English predominates in higher grade levels and code switching between English and Filipino occurs frequently.

Thus, for economic reasons, Filipinos must maintain English in the educational system as a medium of instruction while for political and nationalistic reasons, they must expand the domains of Filipino in the same educational system.

2.6.2 Tanzania:

In the last decade or two several countries in Africa have become independent. However, most of these countries, the majority of which are multilingual, have faced questions of language education policy: Which language is the best medium to be used for education? What is the role of indigenous languages vis-a-vis the former colonial language? In the absence of a single, dominant, indigenous language, some of them have continued to use the former colonial language both as a subject and as a medium of instruction throughout their educational system.

Tanzania is one of the few African countries resisting the general trend of using the language of the former colonial rulers. As Roy-Campbell (1990:75) reports, of the 53 African states only seven -Somalia, Botswana, Lesotho, Swaziland, Rwanda, Brundi and Tanzania- have a common language.

Today Kiswahili is a viable national language which is used in almost all spheres of national activity. However, this does not mean that Kiswahili has replaced English in every domain. There is still the question of the continued dominance of English as a prestige language in the education system. Despite the stated educational policy, the government is not willing to replace English with Kiswahili in secondary and tertiary levels of

education in Tanzania.

To Abdulaziz-Mkilifi (1972:198), the pattern of language use in Tanzania can only be described by the term 'triglossia':

[1]   regional or vernacular languages whose basic role is in oral intragroup communication;

[2]   a local standardized lingua franca which is used extensively in the education system, mass media and in government administration but which is not developed enough to cover all settings of a modern urban technological culture;

[3]   a world language.

According to this description, each of the languages, i.e. vernacular language, Kiswahili and English, has different domains of use in Tanzanian society. For instance while the vernacular is the language of informal situations, Kiswahili is the language of public life, post office, banking etc. English, on the other hand, is the language of higher education, diplomacy and foreign trade.

Therefore, although it is believed that Tanzania with its powerful national language, Kiswahili, may change the common pattern followed by most African countries, the present situation in language use in Tanzanian education is:

> Tanzanian children receive seven years of primary education in the medium of Kiswahili, which is not the mother tongue of all, but the second language of most (an estimated 90% in 1971; Abdulaziz 1971), and the one indigenous language which has been widely developed and has received the status of national language. These children begin learning English in the third year of primary school, for about four hours per week. Following primary education, for the small minority (2.7% in 1981) who manage to enter secondary school, there is a sudden and almost complete switch in the medium of teaching to English. All subjects, with the exception of Kiswahili and Siasa (political education), are at this time supposed to be taught in English (Yahya-Othman 1990:46-7).

2.6.3 Implications for the Turkish Context

In all three countries -the Philippines, Tanzania and Turkey- a number of important parallels exist:

1) the role and status of the languages in question;

2) arguments for English as a medium of instruction such as

   a) English as language of science and technology,
   b) the availability of appropriate materials in the target language,
   c) the socio-economic advantages that English offers,
   d) parental and societal pressures to learn English;

3) the lack of trained teachers who are bilingual speakers of both mother tongue and target language;

4) the alleged inadequacy of the mother tongue as the medium of education at various levels.

In terms of status and prestige there is little comparison between Pilipino/English, Kswahili/English and Turkish/English. To achieve a truly bilingual education requiring the full use of both languages as vehicles of culture and instruction implies a recognition that both languages are equally capable of being such vehicles. Where one language is dominant or perceived to be dominant, positive bilingual education does not occur.

As for the arguments used to adopt English as the medium of instruction, suffice to say that they are used to promote English all over the world and reflect the political and economic dominance of English speakers (see next chapter for a discussion of these arguments).

Most former African colonies still consider the language of the former colonial rulers as the most suitable medium of instruction, particularly beyond the primary level. In Zambia for instance, English serves as the medium more or less from the beginning of primary education. In Nigeria, English becomes the medium of instruction at the secondary level and continues to be used throughout secondary as well as tertiary studies. On

the other hand there are countries like Tanzania, where English is not used until the tertiary level. These differences reflect the status of English vis-a-vis indigenous African languages which are not considered to be adequate vehicles for education.

Here it should be noted that in most multilingual countries like former colonies in Africa and India and the Philippines the language situation is much more complex than it is in Turkey. Turkey is not a multilingual country in the sense that more than 90% of the population speak Turkish and it does not have hundreds of indigenous languages. Thus it does not have to make any decision regarding which language is best suited to serve as the medium of instruction. On the other hand, the complexity of the African linguistic situation hardly needs emphasising, with over a thousand vernacular languages spoken in Africa. Africa's multilingualism, together with her underdevelopment, is given as the main justification for some of the language policies adopted by some African countries. It is argued that first, if one of the vernaculars is chosen for use in the whole education, there would be a strong opposition from the others, even an upheaval. Second, most African economies cannot afford to allocate financial resources to the standardisation of the vernacular or to train teachers or to produce texts in that language. The result is a reliance on the language of former rulers, English, French or Spanish.

Tanzania is believed to be an exception to this common pattern. With the rapid development of Kiswahili and increasingly negative attitudes to English, there may be a shift in the medium of education at tertiary levels in Tanzania.

In the Philippines too, the development or preservation of a national identity is increasingly seen to be closely linked with the promotion of a particular language. Thus, in the Philippines the current policy is to restrict the use of English to mathematics and science and to use Pilipino in all other domains.

Yet we believe that language policies should go beyond the issue of national identity and take account of the interests of learners or of the society in question. That means, of course, a careful investigation into such things as community support, competence of teachers, relative status of languages etc.

The following chapter aims to examine all these variables which are likely to influence the success or failure of using English as the medium of instruction in the Turkish context.

CHAPTER 3

THE SOCIAL, POLITICAL AND ECONOMIC CONTEXT
OF ENGLISH-MEDIUM EDUCATION IN TURKEY

3.1 INTRODUCTION

The focus in this chapter is on Turkey. The aim is to set the stage for the empirical part of the study by highlighting some of the specific contextual factors which contributed to shaping immersion programmes the way they are in Turkey.

We shall start with an overview of Turkey's geographical position, population and the role of religion in Turkish society. Then, we will take stock of the Ottoman legacy, and procede to trace the development of Turkey's political history. This will be followed by an analysis of the principal features of current economic developments. This brief survey of Turkey's political and economic history is intended to show how the development of immersion programmes relates to Turkey's positioning on the international scene.

In the following section we shall attempt to shed light on current language teaching policy from a historical perspective. We will show that foreign-medium education is not something new and untried in Turkey. We will also discuss the rationales for using English as the medium of instruction and see if they are justified.

Turkey is a passage land between Europe and Asia. It consists essentially of the large peninsula of Asia Minor, which has land boundaries with the former USSR to the north-east, Iran to the east, Iraq to the south-east, and Syria to the south. The small region of European Turkey is bordered by Greece, Bulgaria and the Black Sea. Turkey is also surrounded by natural boundaries: the sea on three sides (the west coast faces the Aegean Sea and part of the Mediterranean, which continues around the southwest coast, with the Black Sea in the north) and mountains to the east.

Because of its unique goestrategic position, Turkey is a European, Mediterranean, Balkan and Middle Eastern country all at once. The collapse of the Soviet Union and the subsequent independence of the Turkic republics in the Central Asia have also put Turkey in the middle of a post-cold war agenda of international relations. The existence of close cultural and linguistic ties with the former Soviet republics has enhanced Turkish influence throughout the region. As a result, economic, political and cultural relations between Turkey and these new Turkic republics have developed considerably.

3.2 POPULATION

Turkey's population, about 56 million at the 1990 census, is growing at a rate of 2.5 per cent per annum, higher than European countries, but slower than most Third World countries. Table 3.1 shows the increase in population over the years.

TABLE 3.1			
POPULATION OF TURKEY			
Census dates	Population	Annual increase rate	Pop.density
25.10.1970	35,605,176	2.519	46
26.10.1975	40,347,719	2.500	52
12.10.1980	44,736,957	2.065	58
20.10.1985	50,664,458	2.488	65
21.10.1990	56,473,035	2.171	73

State Institute of Statistics, Prime Ministry: Republic of Turkey.
1990: Census of Population.

Not surprisingly, this rapid increase in population has fundamentally affected almost every aspect of economic and social development from education to social services. It has also brought about unemployment which poses one of the most serious problems confronting Turkey today. In 1990 the unemployment rate was about 8.5% and showed a continuing upward trend.

Much of south-eastern Turkey is inhabited by Kurds. Estimates of their number range from 5 million to 8 million. There are also numbers of Caucasians particularly Circassians and Georgians. There is also an Arabic-speaking minority near the borders with Syria and Iraq.

3.3 RELIGION

Turkey is a secular state. Although Islam was stated to be the official religion in the constitution of 1924, during Ataturk's time, wide-ranging measures were taken to curb the influence of religion on state affairs. In 1928, Islam was abolished as the state religion and the principle of state secularism was established. However, Islamic movements have never ceased to play a role in rallying popular discontent and opposition to the central

state. Some 98% of Turks are Muslims; 20 to 25% adhere to the Alevi, a Shi'ite sect.

There is widespread belief that Islamic fundamentalism is spreading. It is true that there are larger crowds in mosques, more women wearing religious dress, and more Koran courses than a decade ago. Religious education is much more widespread than it used to be. Dozens of religious secondary schools are being established. And religious instruction enjoys a much larger share of the secondary school curriculum. The Welfare Party (religious right) won 17% of the vote on October 20th, 1991 even though 17% is the total vote of the three-party alliance (Welfare and two other smaller right-wing groups) set up before the election.

Toprak (1987) argues that Islamic revival should be considered within the Turkish context as the outcome of an increasingly pluralist society during the 1970's. Earlier, from 1923 to 1970, the state held sway over religious institutions and priority was given to economic and social structural factors, reducing the influence of Islam.

> From the mid-1960s until the military intervention of 12 September 1980, the country witnessed an unprecedented growth of ideological movements represented by various political parties, institutions, and organizations. This period in Turkish history was probably the most liberal in terms of allowing social force the freedom of expression. ... Islamic movements were only one, among several, such forces. And they were not the most militant in demanding regime change (Toprak 1987:230-31).

Fear of Islamic fundamentalism may well be exaggerated. Especially when compared with the situations in Algeria and Egypt at the moment, not to mention Iran, the revival of religious feeling in Turkey seems not to be dangerous. At least, it is far from being a mass political movement since radical Islamist supporters advocating an Islamic revolution remain a tiny minority within the Turkish political spectrum.

As far as the role of religion in Turkish education is concerned, the basis of Turkish education system still remains to be secularism despite the fact that the 1982 Constitution made religious education compulsory in all schools.

3.4 STATE HISTORY

This section starts with a review of the Ottoman legacy and traces the reforms which the new Turkish state attempted to carry out in subsequent years. We will see that apparently radical changes from one political regime to a completely different one, are in effect a continuation of 19th century Ottoman reformism, which was no more than 'borrowing' or 'copying' in an effort to catch up with the West. (The effect of these political changes on educational policies is discussed at length in section 3.8).

It was not until the end of the 17th century that the Ottomans realized the need to change their attitudes towards Europe. Before that date they were completely convinced of their superiority over western states as a result of a series of victories and conquests. However, as the Empire gradually began to weaken, they became aware, belatedly, of revolutionary changes taking place in the western world. They finally admitted that they were lagging behind Europe in terms of science and technology. And from that time on, they strove to catch up with Europe's technical capabilities.

Priority was given to the military in the face of humiliating defeats on the battlefield. Thus came the first attempts to imitate and adopt new techniques and inventions from the West. Under the reign of Sultan Selim III (1789-1807) new military schools were opened. Permanent embassies were established in the major European cities in order to increase contact with the West.

Selim III initiated reforms in the army and in other technical areas in order to stop the steady decline of the Empire. Although these attempts were not successful and resulted in the assassination of Selim by religious groups and the corrupt janissary army, they indicate a recognition of the superiority of the West over the Ottoman Empire for the first time in its history.

Mahmud II also wanted to bring about some reforms which would halt the disintegration of the Empire. As in Selim's period, the priority was given to the military. A new army was set up according to western models. Mahmud also tried to eliminate the influence of the ulema (the Moslem clergy) in Ottoman society. He started a major reform of Ottoman bureaucracy which, later on, together with the military, became a very important agent of Turkish modernization.

The Rescript of Gulhane in 1839 started an era of reform called Tanzimat which continued till 1876. It was a declaration of certain rights as to the security of the life, honour, and property of all Ottoman subjects. Tanzimat reforms aimed at rallying people around the concept of Ottomanism and preventing nationalist movements in the Empire. No success was achieved since reforms in this period did not prevent different nationalities seeking autonomy from the Empire: Greeks, followed by Serbs, Romanians and Bulgarians.

The Young Turks movement stemmed from the inadequacy of Tanzimat reforms in holding the Empire together. In the 1860's young army officers, bureaucrats and writers, under the influence of Western political and constitutional ideas, were convinced that only a new political regime, a constitutional government, could save the Empire.

During that period, we see the proclamation of the first Ottoman constitution in 1876 and the opening of the first Ottoman Parliament in 1877. Despite the remarkable enthusiasm of the Young Turks, this experiment with constitutional democracy did not last long. Parliament was closed in 1878 by Abdulhamid II who ruled the country with absolute despotism for thirty years.

In 1908, however, Parliament was reopened and the constitution was reinstated by Abdulhamid who yielded to the threats of the Young Turks. The second constitutional period of Ottoman history witnessed a political freedom which had not been possible

before. Consequently, three schools of political thought emerged: the Islamists, the Westernists, and the Nationalists.

Of these three, the Nationalists under the name of the Union and Progress Party were responsible for a number of important educational, legal and economic reforms which accelerated the modernization and secularization of Ottoman society. However, defeats in the Balkan Wars of 1912-1913 and internal disorders, in addition to inexperience in constitutional government, led to the failure of constitutionalism and the final collapse of the Ottoman Empire in 1918.

The period 1918-1923 is the heroic epoch in modern Turkish history. During those years the Ottoman Empire was defeated in the First World War and the decaying Empire was divided into Greek, Italian and French zones. All that was left to the Turks was Anatolia. Successful national resistance to further invasion and partition of this Turkish area was launched by people from all social strata and led by Mustafa Kemal. The central slogan of that struggle came to be 'Independence or Death'. As Heper and Landau (1991:11) put it, "unlike later wars of national independence, it was a war not to shake off foreign subjugation but to prevent it; and the result was that Turkey, along with Japan, China and Thailand, never succumbed to European colonial rule".

In 1923 The Republic of Turkey was proclaimed. By the treaty of Lausanne the new Turkey received international recognition restoring control over the whole of Anatolia and Thrace.

Following the establishment of the Republic, came a series of cultural, legal and social reforms initiated by Kemal Ataturk. The list of the reforms given below indicates how far-reaching changes were in Turkey; from multinational Empire to the nation-state of Turkey; a political as well as a cultural revolution.

1924: Abolition of the Caliphate; closing of Islam schools (unification of instruction) and adoption of a new constitution based on based on quadrennial election with universal male suffrage. (As a result, allegiance to Islam ceased to be the official policy of the Turkish state. Turkey became a secular state.)

1925: Replacement of the fez and turban with the European-style hat as male headgear and of the Islamic with the Gregorian calendar.

1926: Adoption of Swiss civil and Italian criminal codes.

1928: Deletion of constitutional provision on Islam as a state religion, adoption of latin alphabet, and decree proclaiming Kemal Head Teacher of the School of the Nation with every Turkish citizen -women or men- a pupil.

1930: Founding and closing, with Kemal's encouragement, of an opposition party (August - November).

1931-2:Founding by M.Kemal of the Turkish History and Turkish language societies.

1934: Laws requiring the adoption of family names and conferring upon M. Kemal the family name Ataturk (Father Turk) and extension of suffrage to women.

1935: The fifth Grand National Assembly includes thirteen members independent of the Republican People's Party including Greeks, Armenians, and Jews; and adoption by the RPP of its Six Arrows or principles: republicanism, nationalism, secularism, revolution-ism, populism and etatism.

1936: The same six principles are written into the constitution.

(Heper and Landau 1991:13)

The reforms, obviously, were not carried out easily and without any reaction. However, "the absence of any detailed political programme proclaimed in advance helped Ataturk maximize the element of surprise and hence minimize the possibility of organized opposition to the far-reaching changes he decreed" (Heper and Landau 1991:13).

After Ataturk's death in 1938, Ismet Inonu was elected President. During the years of the Second World War, a one-party (the Republican People's Party) system continued despite increasing demands for a multiparty regime from elite elements in society. In 1946 the first opposition party, the Democrat Party (DP), was allowed to be formed. The DP's accession to power in 1950 constituted a fundamental break in Turkish history. "For the first time a popular electorate expressed its political choice and voted against a statist tradition several centuries old" (Keyder 1987:124).

The first years of DP rule witnessed radical economic and political transformation. Agricultural development was given particular emphasis since the bulk of the support for the DP came from the peasantry as well as the urban poor. New government opened the doors to foreign capital and relaxed secularization policies. American aid began to arrive in increasing amounts as a result of DP government' renewed allegiance to the West. Turkish troops were sent to the Korean War which resulted in Turkey's joining NATO. Furthermore, a number of military bases were granted to the US army without any formal approval from the Parliament.

By the mid 1950s, the political and economic excesses of DP rule began to cause considerable resentment among the Turkish intellectual, administrative and educational elite. Most importantly the armed forces became sceptical about the future of the revolution. The wave of opposition against the DP government took the form of student protests and academic dissent in the country's elite universities.

Added to this, increasing economic difficulties, high inflation, the government's dictatorial policies and finally, attempts to threaten and silence the much-respected Inonu paved the way for the 27 May 1960 Revolution by the military.

The main justification for the intervention given by the armed forces was the need to protect the Turkish state from Prime Minister Menderes's government's damaging

policies which they regarded as undermining the reforms of Ataturk.

With the military takeover of power on 27 May 1960, the Democrat Party was dissolved and Adnan Menderes and his ministers and more than four hundred people were placed on trial on varying charges from violating the constitution to corruption. Menderes and two of his ministers were executed; his supporters received periods of imprisonment.

In 1961 a new constitution which provided for new social and individual rights was put into effect. As Birand explains, "the 1961 Constitution was a mildly social democratic document which registered that Turkey had become a pluralist society" (1987:11). With the establishment of new constitutional liberties, Turkey began to undergo a rapid transformation. Trade unions emerged along with a Turkish left.

In 1961, Turkey returned to civilian government. In spite of the army's attempts to prevent Democrats from returning to power, the Justice Party, which had taken over from the Democrat Party, came to power. After a period of relatively stable government, the beginning of the 1970s saw the eruption of rivalries in the Justice Party. A splinter party (the Democratic Party) was formed in 1971. Outside the party, new right wing parties (the Neo-Islamic National Order Party led by Erbakan and the pseudo-fascist National Action Party under Alpaslan Turkes) began to challenge Demirel's leadership.

Nevertheless, this period is regarded as the 'golden age of pluralism'. "Rapid economic development and social change generated new expectations and new forces bargaining for their share in the use and distribution of power. The exponential growth of trade unionism and the spread of left-wing ideas -initially in the university campuses of big cities- prompted the inevitable response from the right" (Birand 1987:12).

The response came from the army which believed that the time had come for it to intervene again. This time military intervention took the form of a memorandum sent by

the High Command of the Armed Forces to the President of the Republic on 12 March 1971. In this memo armed forces demanded the formation of a strong credible government which would put an end to the present anarchic situation and enforce Ataturk's reforms. Blaming Parliament and government for driving the country into anarchy, and social and economic unrest, they threatened to seize power to carry out their duty of protecting and supervising the Turkish Republic.

Following the forced resignation of Demirel, Turkey was governed for two years by what were called 'puppet' civilian governments under orders from the military chiefs. When finally free elections took place in 1973, the Republican People's Party under its new leader, Ecevit, became the first party, pushing Demirel's Justice Party into second place. However, lacking an adequate parliamentary majority to form a government, he was forced to form a coalition with Erbakan's neo-Islamic National Order Party. As a result of obvious ideological differences between the two parties, the coalition was short-lived and collapsed in 1974.

Between 1974-1980 governments succeeded one another undermining public confidence in constitutional democracy. A wholesale deterioration of Turkey's economic position was followed with unstable foreign policies. On the economic side, inflation soared and unemployment reached unprecedented levels. Above all, political violence by the extremist partisans of both left and right became unbearable, reaching a death toll of over 1,250 during the first seven months of 1980. To make matters worse, there was a prolonged deadlock in Parliament due to its inability to choose a new president, which provoked strong criticism from the Chief of the Generals.

Political violence almost reached the level of civil war. Inflation and foreign debts continued to escalate, food and power shortages and unemployment were widespread, and the future looked very bleak indeed.

On 12 September 1980, the armed forces, led by general Evren, again intervened, and from then until 1983 Turkey was governed by a National Security Council. Martial law was extended to the whole country and the Grand National Assembly was dissolved. Former political party leaders were detained and all political activity was banned.

On 15 October 1981 a new constitution was drafted to prepare the way for a return to parliamentary rule. Elections under the new constitution -allowing parties approved by President Evren and the National Security Council hence excluding former politicians- were held in November 1983. The Motherland Party led by Turgut Ozal won 45% of the popular vote while the armed forces' preferred party, the centre-right Nationalist Democracy Party, was beaten into third place, with the centre-left Populist Party coming second. Ozal became prime minister in December.

In May 1987, a referendum allowed the restoration of political rights to Demirel, Ecevit and other former party leaders. In the same year, a general election was held. It was the first free election since the 1980 military coup. Ozal's party obtained 36.3% of the votes cast in a modified proportional representation system which required a party to obtain at least 10% of the national vote in order to be represented in the National Assembly. At the local elections which were held throughout Turkey in March 1989, however, Ozal's Motherland Party obtained only 22% of the total votes losing control of local councils in the country's largest cities to the Social Democratic Populist Party.

In the autumn of 1989, Ozal decided to run for president. Because he still commanded an absolute majority in the Parliament, which elects the president, he won easily despite the obvious defeat in election polls. His political opponents argued -as they still do- that what Ozal had done was technically legal but very undemocratic given his all-time low popularity in the eyes of the electorate.

On October 20th, 1991, Turkey held another election. The government that emerged was a coalition between Demirel's True Path Party and Erdal Inonu's Social Democrats. Despite widespread speculation that there will be another election soon, the government still holds on to power to this date.

3.5. RELATIONS WITH THE WEST

Relations with Europe have always been an important issue on the political and economic agenda of Turkey. In fact she looks at Europe as a deliberate choice of identity in foreign affairs.

Turkey has for many years been a member of the Council of Europe (since 1949) and of NATO (since 1952). The most problematic of all is Turkey's relationship with the European Community.

3.5.1 Turkey and the European Community:

When Turkey signed an association agreement with the Community in 1963, political rather than economic factors, played a motivating role. From Turkey's point of view, this agreement would reinforce the ties with Western Europe at a time when she had already made clear her desire to establish close relations with Europe by taking her seat in the Council of Europe and in NATO. Membership of the EC came to mean being a part of Europe.

For the Community, Turkey was an important member of NATO, with her military and strategic significance, especially at a time when cold war conditions were still prevailing. Therefore, for the sake of the security and defence of Western Europe, Turkey was granted an associate member status.

It was not, however, until the early 1970s that the implications of Turkish member-

ship of the Community were grasped inside the country. Turkish political opinion and the opinion of industrialists were divided over the community. The biggest concern was that Turkish industry was not able to compete with European countries. It was argued that full accession to the Community would mean Turkey's dependence on foreign credits and the collapse of small industries in Turkey. Yet, despite all the controversies surrounding it, Turkey signed an 'additional protocol' which aimed to incorporate Turkey gradually into the EC customs union.

Soon after the signature of this protocol, however, EC-Turkish relations began to deteriorate. The Community was enlarged with the entry of Great Britain, Ireland and Denmark which produced a new economic order in the community. In addition, the 1974 Turkish intervention in Cyprus contributed to the deterioration. The military coup in Turkey also had an adverse affect on Turkey-EC relations. Soon after military rule was set up (September 1980), the Community unilaterally froze its relations with Turkey. Financial aid for the years 1981-1986 was witheld.

On April 14, 1987, the Turkish government decided to apply for full membership. This decision was based on certain economic, political and social considerations as Aral (1989:81) explains:

> Firstly, the existing problems of the association can only be solved through a kind of relationship which will safeguard Turkey's advantages; secondly, few people believe that there are any alternatives to closer ties with the West; third, bilateral ties with the U.S. have proved insecure and prone to be influenced by other political considerations. Membership of the EEC will therefore lessen Turkey's dependence on the U.S.A.; fourth, membership would inevitably increase Europe's interest in Turkey and her internal developments. Turkey also hopes to put her case as regards the problems with Armenian and Kurdish nationalities from a position of equality once she becomes a member. ... Turkey considers that full membership will undermine the expansion of Islamic fundamentalists in Turkey; fifth, joining the EEC will end the frustrating and unsatisfactory position of Turkey vis-a-vis European political co-operation and enable her to counterbalance the Greek factor; Turkey also hopes to attract increasing numbers of European investors after gaining access to the Community; finally, Turkish workers will be granted free entry into the EEC labour markets.

In January 1990 the European Community in Brussels postponed Turkey's application for Community membership indefinitely. The EC cited Turkey's still under-developed economy and its poor record on human rights as reasons.

While Brussels is still dithering over Turkey's request for full membership, Turkey has turned its attention to former Soviet Republics. Azerbaijan and Georgia, in particular, have close cultural and linguistic ties with Turkey and can enhance Turkish influence throughout the region. Nevertheless, membership of the EC still remains a preoccupation for the Turkish government. Regardless of what Brussels says, Turkey anticipates joining the Community some time in this century. And if that ever happens, it is said that Turkey will need civil servants who are competent in English, which is on its way to becoming the most dominant official language of the community. Therefore, English-medium education has been promoted wholeheartedly by successive Turkish governments.

3.6. TURKISH ECONOMY

Turkey has been seeking a new existence within the technical, political, and cultural mould of the West for more than a century. Though opinions differ as to the measure of success achieved in this attempt, we believe that it will be apparent from the economic situation in Turkey that dependence on the advanced industrial economies of the West increases day by day.

Despite never being colonized, and having a rich political tradition, Turkey followed a similar economic pattern to that of Latin American and Asian countries. Keyder summarizes this pattern of economic development in the following way:

> It was open to the world economic currents in the 1920; followed a state- interventionist policy in the 1930s; raw material exports characterized the War period; recovery and import-substituting industrialization occurred under post-war American hegemony; and crisis ensued during the second half of the

1970s (1979:3).

Before looking at Turkish economic development over the years we believe it would be useful to define what 'development' means in the Turkish context as it is directly related to the pattern it followed. Ever since the proclamation of the Republic, the issue of development, both economic and political, has been the principal objective for the whole society. "Almost anticipating the tenets of modernisation theory, development meant Westernisation; in particular the adoption of economic and political institutions which, it was hoped, would place Turkey among the modern nations of the world" (Eralp 1990:219). In short, "economics meant development, or modernisation; that is, a process of continual progress aimed at 'catching up with the West'" (p.252).

In line with this policy, the Turkish government, in the first years of the Republic, welcomed foreign capital. Due to the economic and political uncertainties which the young Turkish Republic faced at the time, the rate of foreign involvement in the economy was much less than anticipated. Therefore, the government decided to adopt a closed, state-controlled economic policy. This etatist policy (i.e. industrialization policies mainly initiated by the state in the hands of the bureaucracy) lasted till the end of the second World War after which American hegemony over the capitalist world system was established. In Turkey, after the foundation of the Democrat Party which came to power in 1950, we see a lesser degree of state intervention into the economy. The economic policy of the Democrat Party's regime called for transfer of state-owned enterprises to the private sector and more reliance on agriculture. However, by the mid 1950s when the boom in agriculture ended, it became clear that agriculture could not be maintained as the main source of development. Eventually, aid and foreign borrowing became the only sources to finance the imports necessary for economic growth.

During this period, the DP led government attempted to establish further economic integration with the capitalist world. Closer political, economic, and military ties with the

U.S. were established (Pamuk 1981). In order to create the opportunities and climate for foreign capital flow into the country, as a loyal outpost of the West (using Keyder's terms), Turkey joined NATO and sent troops to fight in Korea, and US military bases were allowed in Turkey.

In the period 1962-1971, Turkish industry grew at an average rate of 9% a year, in what may be described as an import-substituting fashion. This phase represented a drastic change in Turkey's industrialization process. Under the impact of commercialization agriculture underwent rapid change; excess rural population moved to services and industry. Between 1960 and 1970 urban population increased by 5 million persons to 39% of the total. Shanty towns appeared on the outskirts of cities very rapidly.

Foreign borrowing continued during the 1970s which allowed the economy to maintain a high growth rate while postponing the inevitable payment crisis. Turkey's imports exceeded her exports by $10.5 billion in 1975-77. A considerable amount of this deficit was covered by emigrants' remittances. Pamuk (1981:28) explains this:

> During the 1960s and early 1970s over one million workers from Turkey emigrated to Germany and elsewhere in Europe. This mass movement helped ease the pressure of domestic unemployment and the remittances sent by the workers to their families in Turkey created substantial amounts of purchasing power for domestically produced consumer durables. In 1971, remittances exceeded one billion dollars for the first time, representing additional purchasing power equivalent to 8 or 9% of Turkey's GNP.

However, a combination of economic problems following the first oil shock and a slowdown in emigrants' remittances meant that the country was faced with an exhausted repayment capacity and an outstanding debt of $15 billion. Consequently, inflation jumped from 14% in 1973 to 24% in 1974 and rose again to about 25% in 1977. In 1978 it was running at 50% a year, in 1979 at 80% a year, and in 1980 at over 100% on an annual basis.

In 1977, unable to pay massive short-term debts, Turkey was forced to adopt harsh austerity measures demanded by the International Monetary Fund (IMF) and by Turkey's foreign creditors in exchange for new loans. Following a structural adjustment programme introduced in January 1980 with an emphasis on liberalizing the economy, a fairly high economic growth rate was recorded between 1980 and 1987 (8% in 1986 and 7.4% in 1987). Exports boomed, but in 1988 the economy slowed down considerably dropping to a 3.4% growth rate. Turkey's external debt reached $40 billion at the end of 1987 and $49 billion in 1990. It still remains high ($45 billion) with an inflation rate of 50%.

3.6.1 Implications for Education

What does this bleak economic picture imply for education in Turkey?

It is an obvious fact that education is a pre-condition for economic growth. Only by the extension of human skills through education can Turkey achieve the type of economic growth which will ensure opportunities to all for rewarding and productive employment. In turn it is only by rapid economic development that it can provide education to all those who wish it. If this is the objective, then financial resources should be made available for education since lack of finance will affect the structure and quality of education. Expenditure on education should be regarded as an investment which must be related to the broader objectives which education may serve.

However, Turkey is ill-equipped to produce the quality of education required. The following figures will show that the proportion of national resources devoted to education cannot provide optimum educational results, both quantitatively and qualitatively.

TABLE 3.2 EDUCATIONAL EXPENDITURE AS A PERCENTAGE OF GROSS NATIONAL PRODUCT (million TL)			
Years	GNP	Educ. Exp.	%
1983	11,551,860,1	286,619,0	2.48
1984	18,375,000,0	341,555,6	1.86
1985	27,796,800,0	465,982,2	1.67
1986	39,369,500,0	618,523,5	1.57
1987	58,564,800,0	928,604,0	1.58
1988	100,582,200,0	1,797,372,0	1.78
1989	170,633,200,0	2,967,077,0	1.73
1990	286,305,800,0	8,506,541,0	2.97
1991	439,636,800,0	14,943,536,0	3.39

(MEB Bütçe Raporu 1990:166)

Over the period 1983-91 GNP increased sharply, but educational expenditure less so. In spite of a large increase in the number of students and a rising pupil-teacher ratio, educational expenditure is far from catching up with this increase. The main increases occurred in secondary education from 1,633,011 in 1983-84 to 2,373,745 in 1990-91 (45.3%), in lycees from 537,617 in 1983-84 to 794,963 in 1990-91 (47.8%). Budgets therefore needed to rise annually to keep up with rising levels of demands, taking the ever increasing inflation into consideration, of course.

The small proportion of GNP spent on education cannot but cause the quality of Turkish education to suffer. It will adversely affect the provision of books, materials and laboratories. It is therefore, from a long-term perspective, necessary to increase the amount of investment in education for economic and social development.

Turkey has not even solved its literacy problem yet. As the table below shows, in 1985, only 77.3% of the whole population aged six and over is literate. This percentage varies a great deal according to sex: male=86.5% and female=68.2%.

TABLE 3.3 LITERACY BY SEX (1985)		
	Illiterate %	Literate %	Total
Male	13.5	86.5	21,800,854
Female	31.8	68.2	21,311,483
Total	9,703,662	33,321,762	43,112,337

(DIE: Türkiye Istatistik Yilligi, 1990, Ciz.29.)

However, literacy is not the only measure of the quality and quantity of education. If the qualified labour force the country needs is to be trained, we should look at how the literate population is distributed by educational level.

The distribution of the population according to educational levels is expressed below on a percentage basis:

TABLE 3.4 RATIO OF LITERATE POPULATION BY LEVEL OF FORMAL EDUCATION COMPLETED AND SEX (1985)					
Literate (no diploma) %	Primary school %	Junior high &equiv. %	High school %	Higher educ. %	Total
M 21.9	55.2	9.7	9.4	3.8	18,824,697
F 26.5	57.9	6.6	7.3	1.7	14,497,065

(DIE: Turkiye Istatistik Yilligi 1990:49)

As the table above shows, more than half of the total literate population is in the primary level category. The ratio in secondary education also appears to be unsatisfactory, with a lower percentage of primary-school leavers able to continue formal education. In the case of higher education the ratio remains particularly unsatisfactory. The relatively unfavourable position of females is also noticeable at all levels, despite recent improvements in this respect.

In the present realities of Turkey, with a shortage of everything, teachers, buildings and equipment etc., the table below illustrates that the Turkish educational system is far from providing education to the whole population either quantitatively or qualitatively. It shows the pupil-teacher ratio and the number of students graduated at all levels indicating the inadequacy of the system to produce a skilled labour force for economic and social development.

TABLE 3.5 TEACHERS, ENROLMENT AND GRADUATES IN EDUCATIONAL INSTITUTIONS (1988-89)				
	Number of sch.	Teachers	Enrolment	Graduates
Primary sch.	50,747	220,947	6,766,829	1,173,055
Junior high	5,217	43,719	2,019,980	370,737
High school	1,506	59,183	719,872	151,261
Voc.high sch.	1,573	46,847	530,301	108,583
Universities& other higher ed.	368	28,856	560,446	75,639

(DIE: Turkiye istatistik Yilligi 1990:116)

In all parts of the public educational system there is a marked shortage of teaching staff. In some cases, higher education for example, the situation seems to be deteriorating rather than improving, in both qualitative and quantitative terms.

If the table above is examined, it is seen that in primary education the student/school ratio is 133.4 while the student/teacher ratio is 31. In secondary education, the average number of students enrolled in one school is 374 while the student/teacher ratio is 44. In high school, the student/teacher ratio goes down to 12.

Throughout higher education there has been a steady growth in enrolments since the early 80s. However, this has been accompanied by a significant deterioration in the student/teacher ratio. During the 1987-88 academic year there were 343 faculties, 27,196 teaching staff and 504 thousand students. In other words, 1469 students in each faculty and 18.5 students for each teacher. Given the fact that the number of teaching staff includes assistants who are not supposed to teach, then the student/teacher ratio increases twofold.

Under these circumstances, the last thing Turkey needs is to devote increasing resources to an ineffective education given through a medium which is definitely alien to the population. Instead, the focus should be on improving the existing educational system and providing efficient education to all people rather than to a privileged class. Only in this way can Turkey succeed in economic and social development.

Within this economic and historical framework, we shall now look at the educational system in Turkey.

3.7 THE EDUCATIONAL SYSTEM IN TURKEY

With the establishment of the Turkish Republic, the Ministry of Education became the sole authority in organizing and administering education.

The educational system in Turkey can be broadly divided into two parts: adult education and formal education. Formal education covers pre-school education, primary education, secondary education and higher educational institutions. Adult education covers all educational activities beside or outside formal education.

3.7.1 Pre-school Education

It covers the education of children below compulsory schooling age. Pre-school education institutions include independent kindergartens, nursery classes in primary schools and preparation classes.

3.7.2 Primary Education

It is the basic compulsory training period of 5 years. All children must attend primary schools between the ages of 6 to 14. Primary education is free.

The number of schools has risen steadily from 4,894 in 1923 to 51,370 in 1990, and

the number of teachers from 10,238 to an estimated 233,441. In 1990-91 an estimated total of 6,900,693 children were attending primary schools (MEB Butce Raporu 1990:52).

3.7.3 Secondary Education

Secondary education lasts 6 years, and is free. The secondary schools are divided into two cycles, each of three years: middle schools and lycees. Students who wish to proceed to higher education institutions must pass through both stages since a state leaving certificate is required for higher education.

Secondary education also covers vocational and technical education institutions for students who at the end of the course will proceed directly to work. These schools provide specialized instruction with the aim of training qualified personnel. The secondary vocational and technical education comprises men's technical training schools, girl's domestic science schools, health schools, tourism schools, agricultural schools, moslem religious teacher training schools, conservatories, sport high schools etc. In addition to the secondary and high schools mentioned above, there are private and minority lycees in Turkey.

In 1990-91 the number of secondary schools reached 6,714 where 45,920 teachers were employed. A total of 2,373,745 students were attending secondary schools (MEB Butce Raporu 1990:54).

3.7.4 Higher Education

Higher education institutions in Turkey are founded and administered by the state, with one exception, Bilkent University in Ankara. There are now 29 universities and an estimated 386 institutions of higher education (including teacher training colleges). The estimated number of students enrolled in universities and other institutions of higher

education was 465,112 (755,112 including Open University students) in the academic year 1990-91 (MEB Butce Raporu 1990:88).

Here amongst the problems universities face today, we should mention the most controversial body created by the military regime after the 1980 coup, the Council of Higher Education (YOK). YOK was set up by law in 1981 and was chaired by Prof. Ihsan Dogramaci. Council members were appointed by the President himself, General Evren. This initiative was a serious attempt by the government to reorganize and central-ize the university system. During the 1950s and 1960s Turkish universities had autonomy and enjoyed academic freedom. However, to the military, universities were the focal point of the political violence which erupted in the late 1970s. Therefore, university reor-ganization and elimination of terrorist groups which found shelter on campuses became a priority for the military, assuming the role of state protector.

The result was legislation which set up the Council and banned political activity by both students and academic staff in universities. However, this move by the military rulers went much further. The Council was given unlimited authority to hire and dismiss faculty administrators. YOK was empowered to appoint deans and rectors under the indirect control of the Head of State. Moreover, the Council had control over curricula, budgetary affairs and dress codes. In addition, YOK was in charge of assigning faculty members to universities in the less developed regions. A lottery, a very unpopular one, was held to decide who should perform obligatory service for one year in those regions of the country.

Thus, YOK was the sole authority to decide what subjects were going to be taught in universities and how. YOK used its authority to the full extent despite extensive pro-tests by academics, students, writers, by all the people concerned about Turkey's academic future. In 1982, some three hundred academics were fired, an estimated three hundred more resigned in protest. Most of them were distinguished professors from

universities in big cities like Ankara and Istanbul. No attempt was made to justify these dismissals.

After almost ten years, these professors who are called '1402'likler' in Turkish (namely, faculty members purged by YOK under the martial law numbered 1402) were allowed to return to the universities by a court ruling. However, the damage was done and some of the professors preferred not to go back to their universities.

3.8 FOREIGN LANGUAGE EDUCATION IN TURKEY

In this section we will look at foreign language education in Turkey from a historical point of view. A study of policy changes and shifts from one language to the other in the language medium used for education will show that the issue at hand is not new, but recurs over and over again in the history of educational development in Turkey. Unfortunately, long periods of French-medium education before the foundation of the Turkish republic and English-medium education today do not seem to be producing the desired effect, that is, catching up with the West.

In the Ottoman period, before the Tanzimat era's reformist movements, two types of religious-based educational institutions existed. These were Sibyan Okullari (primary schools) and the Enderuns (the Palace schools).

Sibyan Okullari were primary schools where instruction was entirely limited to teaching and learning the Koran. The Koran was read and recited, and the principal prayers were learned by rote. Arabic was not taught in the modern sense except for copying out Arabic texts. As for Turkish, there was no place in the curriculum for it.

Medreses (secondary and university level educational institutions) provided a more advanced religious instruction. The curriculum included subjects ranging from geometry and arithmetic to medicine. Arabic had an important place in education whereas Turkish

was largely neglected. Thus, it is possible to suggest that the adoption of Arabic as the medium of instruction started in Medreses.

Enderuns (the Palace schools) were relatively secular institutions under the control of the Sultan. The aim of these schools was to train students for leadership positions in the political and administrative offices of the Ottoman Empire. Instruction included Turkish, Arabic, Persian, religion and culture, Turkish customs, rules of courtesy, riding, wrestling and music. One important aspect of Enderuns was the teaching of Turkish as a foreign language to non-moslem students.

As discussed earlier, during the heyday of the Empire Ottomans were convinced of their superiority and self-sufficiency, and considered Europe as "an outer darkness of barbarism and unbelief, from which the sunlit world of Islam had nothing to learn and little to fear" (Lewis 1968:34). Later on, the gradual weakening of the Empire both economically and militarily made them realize that it was time for a change in their attitudes towards Europe.

The second half of the 18th century is generally considered to be the starting period of modernization in the Ottoman Empire. In this period, contacts with the West developed with systematic borrowing of techniques, institutions and languages as well. These attempts at modernization, defensive at first, affected educational institutions and foreign language teaching policies profoundly.

As a first step towards change, Muhendishane-i Bahri-i Humayun (Imperial Naval Engineering School) was opened in 1773. The main aim of this school was to train officers and engineers for the Ottoman naval forces. The establishment of Tiphane-i Amire ve Cerrahhane-i Mancure (Imperial Medical School and Surgery School) in 1827 and a new Military Academy followed. Several characteristics of this reform movement in education are noteworthy. First, as a result of the emphasis put on the acquisition of

foreign languages and modes of thinking in these schools, an elite group who would play a significant role in the later stages of the reform movements was created.

Second, and more importantly as far as the introduction of foreign languages into the educational system of the Empire is concerned, the French language became dominant among foreign influences in this period. French officers, technicians, and military experts were brought over as teachers and instructors; and the French language was made compulsory for all students (Lewis 1968:58). French as the medium of instruction was adopted in 1839 by a medical school, the purpose of which was to train doctors for the new army.

The foundation of Mulkiye (later known as the School of Political Sciences) in 1859 marked a turning point at which the emphasis on foreign language in the curriculum was put into practice for the first time in civilian schools. The Mulkiye was set up to select and train persons for the administrative positions. Its graduates attained the highest positions in the government service and were responsible for making and implementing decisions concerning change and innovations in both Empire and Republic.

The Imperial Lycee at Galatasaray, the first lycee in Turkey, was opened in 1868 under the influence of the French institutional model. Lewis (1968:122) sees the establishment of this school as a landmark in the history of Turkish education as it demonstrates the growing need for social and educational change as well as for foreign languages.

> In this school the language of instruction was French (except for purely Turkish subjects) and a serious attempt was made to give a modern and western curriculum of secondary education. A few such schools had already been established by foreign missions, notably American Protestant Robert College (1863). The Galatasaray school was, however, the first serious attempt by a muslim government to provide modern education at secondary level in a Western language. Another new feature was the teaching of Muslim and Christian pupils side by side -a step towards religious desegregation. The influence of Galatasaray school on the rise of modern Turkey had been enormous. As the

need for administrators, diplomats, and others with a Western education and a capacity to handle Western administrative apparatus became more and more pressing, the graduates of Galatasaray came to play a preponderant role in the politics and administration of the Ottoman Empire, and after it, of the Turkish republic. The Imperial Ottoman Lycee had no playing field, but not a few of the victories of modern Turkey were won in its classrooms.

As Kazamias notes (1966), the French were particularly delighted that French was adopted as the language of instruction in Galatasaray which meant that they could extend their cultural and political influence into the Middle East.

In addition, there were educational institutions set up for ethnic minorities and by missionary groups. The most striking example of Protestant missionary foundation was Robert College, established in 1863 and renamed University of Bogazici in 1971. The purpose of Robert College was to provide Christian education similar to contemporary New England colleges and at the same time, to expand American culture in the Ottoman Empire. It was impossible for Turks to attend this or other minority schools, first because it would mean converting to Christianity which was forbidden under penalty of death; and second, the medium of instruction in these schools was the language of minorities (Demircan 1988). Therefore, it was not until 1903 that the most prestigious American school, Robert College, produced its first Turkish Muslim graduate.

The number of foreign missionary schools steadily increased until the proclamation of Turkish Republic. These schools, in the gradually collapsing Ottoman Empire, aimed to provide Christians and minorities with an education suited to their own political and economic interests.

TABLE 3.6 THE NUMBER OF FOREIGN SCHOOLS IN THE EMPIRE (1894)			
	In Turkey	In Arab Provinces	In Balkans	Total
France	65	46	3	114
U.S.A.	64	33	1	98
England	8	44	1	53
Italy	12	10	15	37
Germany	4	13	1	18
Austria	8	3	13	24
Greece	11	1	-	12
Russia	1	4	5	10
Romania	-	-	24	24
Serbia	2	-	2	4
Unknown	48	3	1	52
TOTAL	223	157	66	446

(Demircan 1988: 55)

In the first years of the Republic, Ataturk and his followers were convinced that the first problem to deal with in building a new nation was education and the low literacy rate, 6% at the time. Therefore, they mainly concentrated on providing basic education to all people. In this period, foreign language teaching was put into second place giving priority to Turkish which was considered to be the element of national identity. Knowledge of a foreign language was seen as a vehicle of technology transfer from the West by way of translation, contrary to the present policy of teaching everything in the foreign language. Thus, to Ataturk "our national system of education should be something different from the old and something that grows out of our new nation ... and national genius can only be developed through our national culture" (Kazamias

1966:115).

A series of educational reforms was initiated by Ataturk himself which need to be examined here because directly or indirectly they affected the teaching of foreign languages.

The first important step taken by the government was to centralize the whole educational system under the supervision and control of the state in 1924. This included the closure of Medreses. Teaching of Arabic and Persian which were the dominant languages for centuries was abandoned. Only in Imam-Hatip schools did Arabic teaching continue. In parallel with the notion of turning Westward, in this period foreign language teaching came to mean teaching one of the western languages, English, German or French. Private and minority schools came under the control of the central educational ministry; "the central authority had to grant permission for their opening, approve their courses of study and regulation governing their operation and inspect them" (Kazamias 1966:118).

The second educational reform worth mentioning here is the abolition of Arabic script in 1928. Arabic letters were not suited to express the sounds of the Turkish language and it was also extremely difficult to teach and to print. Therefore, as Ataturk stated, it constituted a barrier to education and the cultural expansion of the new Turkish state which was gradually taking a new shape as a secular, national and modern state.

It is the motivating factors behind these reforms which make them relevant to foreign language teaching in Turkey. Both reforms aimed at fostering a new linguistic and cultural Turkish idendity. Particularly, Turkish language reform stressed the inseparable link between national culture and national language. Ataturk (1930), on many occasions, stated this fact:

> The tie between national feelings and language is very strong. A national and rich language is the major factor in the development of national feelings. ...

The Turkish nation, which has been able to preserve its territory and its noble independence must also liberate its language from the yoke of foreign languages.

As Heyd (1954:4) pointed out,

the reform of modern Turkish is not only an interesting attempt to change the Turkish language deliberately and methodically; it is also an integral part and an important manifestation of the social and cultural transformation which has taken place in Turkey.

This linguistic nationalism led to the adoption of Turkish as the medium of instruction and to the teaching of foreign languages as subjects. Foreign and minority schools were allowed to use a foreign language in teaching subjects like mathematics and science but the others, such as history and geography, were to be taught in Turkish.

Here we should mention the role of the Turkish Linguistic Society in the development of Modern Turkish and its contribution to the development of a simple and pure Turkish.

After abolishing Arabic writing in 1928, Ataturk turned to broader language questions. In 1932, under his leadership, The Turkish Linguistic Society (Türk Dili Tetkik Cemiyeti, later renamed in new Turkish, Türk Dil Kurumu (TDK)) was established.

There were three essential tasks laid down by the Central Committee, elected at the first Turkish Language Congress in 1932: to collect Turkish words from the popular language and from old Turkish texts; to define the principles of word formation and to create words from Turkish roots; and to encourage the use of true Turkish words in replacement of foreign words used in the written language (Gallagher 1971:165)

In the following decade TDK's work toward the purification of Turkish has gained momentum. Tentative Ottoman-Turkish and Turkish-Ottoman dictionaries were compiled showing the new Turkish equivalents of Ottoman words (Heyd 1954).

However, the work of the Society met with severe criticisms from conservative

groups in society. Heyd (1954:45-46) explains the reasons in the following way:

> Conservative circles feared that the wholesale elimination of Arabic and Persian words and expressions would lead to a complete break with the religious and cultural traditions. Convinced liberals, who strongly objected to authoritarian rule and to the large-scale state intervention in all spheres of public life, complained that the Linguistic Society, in collaboration with the authorities, had tried to impose the new language on the nation.

There was a linguistic side to these criticisms. Some people claimed that TDK destroyed the language, its harmony and simplicity. The others said language should be left alone to evolve since interference by any organization is damaging to its development. TDK was accused of creating an artificial language which was very different from the daily language of common people.

Consequently, translation of the Constitution into Turkish was cancelled. The ban on the call to prayer in Arabic was lifted. The use of Turkish words dropped significantly. As Imer's study (1976) shows, the use of Turkish words in newspapers and in news on radio was 57% before the 1950's, but it has dropped to 51%. We also see a trend towards borrowing words from European languages which replaced Arabic. European terms have started to flood into Turkish.

Heyd (1954:80) disapproves of this trend which still continues today:

> Modern Turkish appears to repeat what its reformers consider an unfortunate development of the time when the Turks accepted Islamic civilization. Instead of framing words for Western objects and concepts out of its native word-material, it adopts European terms in ever increasing numbers.

However, after the 1960 revolution, the TDK's work for language purification regained support. The government also decided to support the Association financially as it did before the 1950s. After 1960, we see numerous studies particularly on Turkish grammar mainly focusing on word formation in Turkish. Additionally, the history of Turkish was examined as in *Türk Dilinde Gelişme ve Sadeleşme Evreleri* by A. Levend

(see Hazai 1974). A number of dictionaries were compiled in different fields, such as Zooloji Terimleri Sozlugu, Sinema Terimleri Sozlugu, etc.

In the 1970s, the development of modem Turkish once more slowed down due to an increasing tendency to adopt foreign words from western languages and also due to conservatives' support for the use of Arabic. And finally after 1980, TDK and the Turkish Historical Association were merged under the name of Turkish Language and Historical Association despite extensive protests from all the people who are concerned about the future of the Turkish language. Once more, as in the last years of the Ottoman Empire, imitating and borrowing from the West became the only solution to quicken the process of becoming a developed country, i.e., catching up with the west.

Consequently, the need for foreign languages became greater than ever. While Galatasaray was the only school with a foreign language medium by 1956, in the following years new colleges under the name of Anatolian Lycees began to be opened. In 1973-74 the number of official lycees using a foreign language as a medium of instruction rose to 8; in 1983-84 it reached 16 and in 1989-90 it totalled 76. Table 3.7 below shows this increase.

TABLE 3.7 ANATOLIAN LYCEES			
	Number of schools	Number of teachers	Number of students
1957-58	2	2	21
1963-64	8	44	1,214
1973-74	8	168	2,382
1983-84	16	969	8,117
1989-90	76	3,054	21,377

(M.E.B. Brifingi 1990:36)

Large-scale migration, particularly to the Federal Republic of Germany, changed the balance of foreign languages in favour of English and German ending the demand for French which had been the dominant foreign language till the 1950s.

The following table illustrates the balance of foreign languages from 1773 to 1980s.

TABLE 3.8 PRIORITY LIST OF FOREIGN LANGUAGES IN TURKEY				
Before 1773	1773-1923	1923-1950	1950-1980	After 1980
1. Arabic	Arabic	French	English	English
2. Persian	Persian	English	French	German
3. Turkish	French	German	German	French
4.	English	Arabic	Arabic	Arabic
5. German		Persian	Persian	

(Demircan 1988:116)

As noted earlier in the case of Anatolian Lycees, in recent years the trend has been towards foreign language-medium schools where the curriculum consists of courses like psychology, logic, philosophy, science and mathematics which are taught entirely in a foreign language and with Turkish language and history courses taught in Turkish. In the last decade the number of these schools increased remarkably. Table 3.9 illustrates this increase.

TABLE 3.9 NUMBERS OF FOREIGN LANGUAGE MEDIUM SECONDARY SCHOOLS IN TURKEY								
Years	English			French		German		Italian	Total
	S	P	T	S	P	S	P	P	
1955-56	5	8	13	1	7	-	3	2	26
1960-61	6	8	14	1	7	1	3	2	28
1965-66	6	8	14	1	7	1	3	2	28
1970-71	9	8	17	1	7	1	3	2	31
1970-76	10	8	18	1	7	1	3	2	32
1980-81	19	10	29	1	9	2	3	2	46
1981-82	22	14	36	2	9	3	5	2	57
1982-83	22	19	41	2	9	3	5	2	62
1983-84	30	25	55	2	9	4	5	2	77
1984-85	52	35	87	2	9	6	6	2	112
1985-86	70	48	118	2	9	7	6	2	144
1986-87	74	75	149	2	9	7	6	2	175
1987-88	90	103	193	2	9	7	8	2	221

S: State   P: Private   T: Total

(Demircan 1988:119)

The number of English-medium universities has increased as well. Recently, Marmara University in Istanbul decided to adopt the language policy of using English as a medium of instruction for all subject matters. There are now four English-medium universities in Turkey: Bogazici University, Middle East Technical University, Bilkent University and Marmara University. And it appears that there are a number of universities on the waiting list, eager to replace Turkish with English for instructional purposes and to provide their students with a so called "passport" to success in life, that is, English.

To sum up, English has become something one must learn in Turkey. Without it, the doors to a better position are closed. Enormous resources are deployed by parents for their children to be educated in a foreign language despite the fact that most of the students are automatically excluded from realizing this dream by failing in one of the numerous exams they have to take. The pressure is so great that even primary students are forced to take extra private courses in the hope that this will improve their chances of gaining access to an English-medium secondary school. This struggle continues right up to the university entrance exam when students once more have to take private swotting courses in a bid to obtain a place in one of the so-called "privileged" universities which supposedly guarantee their graduates a more prestigious position in life than regular universities can offer.

3.8.1 Language Teacher Training

For second language teaching, teacher training programmes typically include a theoretical -linguistics and language learning theory, and a practical component, based on language teaching methodology and teaching practice.

Over the last twenty years we have seen a change in the theoretical basis from the study of phonetics and grammatical theory to the study of pedagogical grammar, discourse analysis, second language acquisition, classroom-based research, interlanguage

syntax, phonology, curriculum and syllabus design. The primary goals of teacher training as stated by Pennington (1990:150) reflect this change of focus in teacher training programmes:

- a knowledge of the theoretical base of the field in language learning and classroom research;

- informed knowledge of self and students;

- decision-making and communication skills;

- the analytical skills necessary for assessing different teaching situations and the changing conditions in a classroom;

- awareness of alternative teaching approaches and the ability to put these into practice;

- the confidence and the skills to alter one's teaching approach as needed;

- practical experience with different teaching approaches.

In Turkey the English language teacher training courses are run by the Departments of Foreign Language Education, which are an integral part of the Faculty of Education.

The curricula of the Faculty of Education are designed to train teachers for institutions of secondary education. Students are provided with a sound theoretical and practical foundation in education and in their particular subject specialities so as to prepare them to carry out secondary education of highest caliber (METU Undergraduate Catalog 1990-92:197).

In the Departments of Foreign Language Education, the aim is, in the light of the latest developments in the field, to provide students with a solid foundation in English language, methodology, educational sciences, literature and linguistics in order to prepare them to become fully qualified teachers of English in secondary schools (METU Catalog 1990-1992:208).

The courses offered by language teaching departments are prescribed by the Council of Higher Education. However, it is possible for departments to exercise some discretion. For instance while the English Language Teaching Unit at Cukurova University offers

courses like sociolinguistics, psycholinguistics and mythology, courses at METU seem to aim to provide students with knowledge about the language. The following table looks at the courses which students are required to take in the Department of English Language Education at METU.

TABLE 3.10	
UNDERGRADUTE CURRICULUM AT METU	
First Year	Second Year
English Grammar	English Composition
Readings in Eng.	Intro. to Linguistics
Spoken English	Readings in English
Eng. Composition	English Grammar
Survey of Eng.Lit.	Intro.to Education
	Educ. Psychology
	Educ. Sociology
Third Year	Fourth Year
Eng.-Turkish Trans.	Turkish-Eng. Trans.
Semantics	ELT Methodology
Eng. Literature	Eng. Literature
Readings in Eng.	Adv. Eng. Structure
Intro.to Curriculum Dev.	Senior Research Seminar
Eng. Composition	Eng. Composition
Comp. Eng.-Turkish Str.	Practicum (2nd term)
Measurement&Evaluation in Education	

(METU Undergraduate Catalog 1990-92:208-209)

As indicated in the above table, all first year students of English take a course in English Grammar. This course provides a thorough grounding in English grammar at the intermediate level, with an emphasis on usage. In addition, first year students take courses to develop the four skills (listening, speaking, reading and writing) in English as well as basic concepts of literary analysis and critical appreciation.

During their second year they continue studying English grammar and take a course in systematic language study. In addition, students are introduced to English social and cultural history and to advanced level texts.

Third year students are required to take a course in contrastive analysis of the linguistic structures of English and Turkish with implications for language teaching. They translate texts from English to Turkish and study English literature (selected Victorian novels).

In the fourth year students are introduced to principles and techniques of English language teaching. They continue to study English literature and grammar, this time at advanced level. Students do a 'practicum' in teaching English as a foreign language to secondary school students under staff supervision.

Having described the training programme for teachers of English at METU, which is the same all around Turkey with some variations, we shall now discuss the adequacy of this training in the Turkish context.

It is clear from the description above that students are taught a great deal about the language since courses in grammar represent the bulk of the curricula offered in English Language Teaching Department. Although we do not argue for the exclusion of such courses from the curricula, we believe that in the light of current language learning theories, a better balance between analytic and experiential elements in the programme

should be aimed at (Stern 1990). Traditionally, teacher training programmes in Turkey concentrate on analytic elements only. The result is that students do not have sufficient English language competence to function effectively in classrooms. It is clear to us that classroom communication skills cannot be developed through a programme focusing on grammar. The methodology used in these programmes naturally influences the kind of instruction graduate teachers will be providing in secondary schools. It is apparent that teachers are teaching as they are taught at university.

The second problem related to the nature of the courses offered to students is that the focus is on language pedagogy i.e. language teaching techniques and other technical matters. Other aspects, just as important as pedagogical matters, like social, economic and political issues are totally absent from the curriculum. As if anything to do with politically sensitive or contentious issues had to be avoided and English were to remain a purely technical exercise. To Phillipson (1992:67) such an approach serves to disconnect culture from structure and assumes that

> educational concerns can be divorced from social, political, and economic realities. It exonerates the experts who hold the belief from concerning themselves with these dimensions. It encourages a technical approach to ELT, divorced even from wider educational issues. It permits the English language to be exported as a standard product without the requirements of the local market being considered except in a superficial way.

Another point we wish to make here has to do with practice teaching. In many teacher training programmes, practice teaching is the central component. It is through teaching practice that the student teacher receives feedback and applies knowledge and skills s/he has gained during the whole education programme. S/he can develop strategies for handling the different dimensions of a language lesson.

> For successful language teaching, both education and practical training are needed in the 'tools' of the teaching profession: in methods, materials, curriculum, and evaluation. ... The effectiveness of both the purely educational and practical training aspects of the teacher preparation program can be increased by not maintaining the strict separation of these two components that is typical

in most programs (Pennington 1990:134).

In Turkey these two components are separated, too. In most cases, student teachers do not have actual chances to teach until the end of their programme. Therefore, they have little or no practical experience of any kind before the formal teaching practicum in the final semester. As Pennington (1990) suggests, a pre-practicum or two-phase practicum program would give students actual teaching experience and also integrate theory and practice.

3.8.1.1 Service Training in English for Content Teachers

As noted in Chapter two, content teachers in English-medium institutions in Turkey assume the roles of content and language teachers at the same time. They are expected to help students' language proficiency in English by imparting subject matter knowledge in English. However, they do not receive any special training to this end.

If language teaching is going to be cohesively integrated into the subject-matter courses, as proposed by the advocates of the immersion approach, then this can only be accomplished by scheduling intensive in-service training for content teachers. Teachers should be exposed to theories of second language acquisition. They should be introduced to innovative approaches in language teaching and techniques to develop second language skills so as to make the CBSLI classroom a more effective context for both content and language learning.

There are some intensive summer English courses organized by a limited number of universities which already have foreign language teaching centres. This practice started in 1986 in three universities with 1,799 teachers. Today, it involves 16 universities and 6,440 teachers (MEB Butce Raporu 1990:91).

The adequacy of these courses is far from being convincing. First of all, the main

target is not training content teachers at all. They are general, open-to-everybody courses. Second, the focus in these programmes is on providing participants with a knowledge about the language. They do not enable content teachers to manipulate content teaching to boost its language teaching potential by making necessary adjustments in the presentation of content.

We would argue that in the case of teachers using a second language as a medium of instruction, the need for training in the specific uses of language in a classroom is imperative. Content teachers should be trained to use English effectively for classroom communication. They should be helped to develop communicative competence. This should be regarded as a pre-requisite for teaching any subject in the curriculum effectively through the medium of English.

3.9 THE ISSUE OF THE LANGUAGE OF INSTRUCTION

3.9.1 The Legitimacy of the Arguments for English-Medium Education in Turkey

The following section discusses several arguments which are typically used to legitimate the use of English as a medium of education not only in Turkey but in other countries as well.

Phillipson (1992), in his study of English linguistic imperialism in the world, groups such justifications for the use of English according to whether they refer to the 'intrinsic' qualities of English (what English is), its 'extrinsic' qualities (what English has), and its functions (what English does).

He explains that

> English-intrinsic arguments describe English as rich, varied, noble, well
> adopted for change, interesting etc. English-extrinsic arguments refer to text-
> books, dictionaries, grammar books, a rich literature, trained teachers, experts
> etc. English-functional arguments credit English with real or potential access

to modernization, science, technology, etc., with the capacity to unite people within a country and across nation, or with the furthering of international understanding (1992: 272).

Such arguments do seem intuitively commonsensical. We readily tend to accept that English is a world language and that it is 'all right' to use it as a medium of instruction in our schools. However, we overlook the fact that these arguments are used to promote English and are based on scientifically unproven notions of structural and logical superiority. A possible explanation for this general acceptance, particularly in English language teaching circles, is that we tend to confine ourselves to pedagogical matters, forgetting the political, economic, cultural implications and ramifications of the specific context in which the teaching takes place.

Now let us look at each set of arguments used to promote English in Turkey, with examples drawn from other countries as well.

3.9.1.1 English-Intrinsic Arguments

These arguments extol the intrinsic qualities of English. To some, English is a 'linguistic miracle' (Kachru and Quirk 1981: xiv quoted in Phillipson 1992). To others, it is a 'God-given asset' (British Council Report 1983-84:9 quoted in Phillipson).

Some influential linguists, too, join in the chorus praising the qualities of English. Phillipson quotes (1992:275):

> It must be a source of gratification to mankind that the tongue spoken by two of the greatest powers of the world is so noble, so rich, so pliant, so expressive, and so interesting (Jespersen 1905:234).

> English possesses a great range of rules for the formation of new words... English, it would seem, is well adapted for development and change (Strevens 1980:85).

> Since no cultural requirements are tied to the learning of English, you can learn it without having to subscribe to another set of values...tied to no particular social, political, economic, or religious system, nor to a specific racial or

cultural group, English belongs to everyone or to no one, or it at least is quite often regarded as having this property (Wardhaugh 1987:15).

After reading these statements one can easily conclude that English is so noble and beautiful that you feel deprived of something very valuable if you do not learn it. The fact is that English is advertised and sold just as French was when it was presented as a language of elegance and civility in the early years of the Turkish republic (see Section 3.3 in this chapter for a historical overview of foreign language education in Turkey).

First of all, it is highly questionable to assert that English is neutral and that no cultural requirements are tied to the learning of it. Its ideological impact in Turkey and in other underdeveloped countries cannot be denied. As Freire (1972:13) puts it

> There is no such thing as a *neutral* education process. Education either functions as an instrument which is used to facilitate the integration of the younger generation into the logic of the present system and bring about conformity to it, or it becomes the practice of freedom, the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world.

Alptekin et al. (1984) also draw attention to the problem of cultural domination. They argue that "being at the receiving end of a virtually one-way flow of information from Anglo-American centers, the host country runs the risk of having its own culture totally submerged".

We should also remember that all the languages, in principle, are equals. They fulfil any function that the community demands. As Skutnabb-Kangas (1981:3) puts it:

> Considered as tools with which to handle the world, all languages are of equal worth. Every language spoken by a group of people as a mother tongue is sufficiently developed also to be able to function as a medium of instruction. From a linguistic point of view, it is not possible to describe one language (for example, Spanish or Swedish) as "better" or "more developed" than another (for example, Guarani or Same) -in that respect all languages are equal.

> Edward Sapir paid (1921:22):

There is no more striking general fact about language than its universality. One may argue as to whether a particular tribe engages in activities that are worthy of the name of religion or of art, but we know of no people that is not possessed of a fully developed language. The lowliest South African Bushman speaks in the form of a rich symbolic system that is in essence perfectly comparable to the speech of the cultivated Frenchman.

Sankoff (1976:284) also agrees that

there is no evidence that in terms of the basic machinery of a language considered as a code for transmitting messages, i.e. the phonology, morphology, syntax, or even the overall semantic organization, any one language is inherently superior, more logical, accurate or efficient, or in any way preferable to any other language. Thus stereotypes such as that French is a particularly beautiful or precise language, that English is inherently better suited to scientific thinking, that non-standard English is illogical, etc., have no basis in linguistic science.

Obviously, this does not mean that there are no differences between languages. One particular language may have developed itself in its written form while another may have done so in the terminology of a specific field. As Skutnabb-Kangas states, these differences are technical matters. And they can be solved when sufficient resources are invested in it. "The fact that in principle every language is as good as every other is thus not reflected in the pattern of use -power relations decide" (1981:4).

3.9.1.2 English-extrinsic arguments

English-extrinsic arguments generally refer to material (books, trained teachers etc.) and immaterial sources (knowledge, skills and expertise) available in the language.

In many underdeveloped countries, including Turkey, this argument constitutes the main justification to promote English in the educational system. The usual rationalization is that we need scientific and technological development urgently. Since our own language is not developed enough to express highly sophisticated technical and scientific processes, we use English (or French etc.) as a medium. English is the key to rapid technological progress and modernity. If we do not use English as a medium, we will be left

behind with respect to scientific and technological development.

Examples to underscore this reasoning can be found all around the world. In Tanzania, for instance as in many other former African colonies, the medium of instruction in primary schools is Kiswahili, while at secondary and tertiary levels it is English. Although Tanzanian policy over the past 20 years has aimed to replace English by Kiswahili as a medium of learning at all educational levels, it has never been implemented. And the main reason officially given is that English is a world language. Therefore, it should be maintained as a medium of instruction in order to catch up with scientific and technological innovations in the West (Rubagumya 1990).

In most African countries (Ghana, Nigeria, Zaire, to mention only a few) English or French play the same role. They are perceived as the key to progress and modernity which of course reinforces the belief that no education is good enough if one of these languages is not used.

Turkey is another example of an underdeveloped country where the main consideration is the acquisition of technological skills for economic development. Thus, the knowledge of a major world language is considered as a prerequisite for scientific and technological development. From the very beginning, when French held sway in education, the basic rationalization was, and still is, that the chosen foreign language was the language of science and technology, and that if one was to catch up with developed countries and transfer technological innovations to Turkey, that language should be the medium of instruction (Doltas 1989, Eren 1963).

Such a perspective reflects a colonized mentality. As Phillipson puts it (1992:248):

> One of the legacies of colonial education was that language was perceived as a *panacea* for the solution of not only educational but also development problems. The argument used to promote English linked use of the master language to the promise of economic progress, enlightment and so on, but that

promised land is still for most an unredeemed promise.

3.9.1.3 English-Functional Arguments

This type of argument refers to what English does since, in addition to the resources that English has, underdeveloped countries also need what English gives access to.

In the Turkish context this argument usually runs as follows (we believe it is not very much different in other countries): Turkish students should learn English because English is essential as a means of international communication. It is argued that if it is used as a medium of education, students will be able to keep abreast with what is going on in the world. They will have better access to source materials such as scientific, technological and medical journals and should they go on to study abroad, it will be easier for them to understand lectures and tutors, and of course to make themselves understood.

But how many students will realistically ever meet native speakers of English or non-native speakers who have English as their second or third language, and what percentage of the students will need English for communication purposes and how many students will go abroad to study? No one really knows.

The usual answer to this argument is that it is pertinent only with regard to the small educated elite. Thus the use of English as a medium of education in a few selected institutions creates an elite alienated from the rest of the population. The pursuit of this elitist education is in conflict with stated policies which are supposed to serve the interests of the entire nation rather than particular interests.

Furthermore, English-functional arguments imply that other languages are inferior. The table below lists the labels attributed to English (Phillipson 1992:282):

TABLE 3.11	
THE LABELLING OF ENGLISH AND OTHER LANGUAGES	
Glorifying English	Devaluing other languages
-World language	-Localized language
-International language	-(Intra)national language
-Lang. of wider communication	-Lang. of narrow communication
-Auxiliary language	-Unhelpful language
-Additional language	-Incomplete language
-Link language	-Confining language
-Window onto the world	-Closed language
-Neutral language	-Biased language

According to this labelling, Turkish along with the others is incomplete, unhelpful, confining etc. whereas English is the greatest language of all. This is a clear example of linguistic imperialism and it is not valid on the basis of linguistic relativity, the basic tenet of which is that all natural languages are on an equal footing in terms of their capacities for human communication (Sankoff 1976).

3.9.2 A Case for Turkish

In the following section we present what, in our view, is a strong case for Turkish. We answer the main objections put forward against the use of Turkish as the medium of instruction.

Fasold (1984:22) argues that there are three main considerations in choosing a language of instruction:

1. Do the prospective students know the language well enough to learn effectively through it?

2. Would the proposed choice be consistent with overall nationalist aims?

3. Are the language itself, the material written in it, and the number of people able to teach in it adequate for use at the proposed level?

Turkish would be the choice for higher education on these three criteria since the answer to all of them is a definite 'Yes'. So, why is English still preferred to Turkish in some Turkish universities as the medium of instruction?

It is beyond dispute that the best education in any society is given in a language in which neither the learner nor the teacher struggles for comprehension. If there is to be communication in the teaching/learning process, participants need to command that language well. From a more general perspective, the language of education should be the language of the majority in that society. It should be accessible to everybody rather than to a small elite so that dissemination of the knowledge obtained in the process can be achieved.

This can only be done through Turkish in Turkey since the language accessible to the majority of the population is Turkish. Only in this way can students have a better grasp of subject matter, retain what is learned longer and have a greater power of self-expression because

> Thought cannot be separated from language. When command of the language is imperfect, then thinking is inhibited. If a man borrows a strange language to express himself, at least part of his thought is also borrowed and vital elements of his individuality are sacrificed. Yet true creativeness involves the fullest possible expression of self (Prator 1950:14).

And because

> Language has a function which goes far beyond the communication of verbal messages. The possession of language is prerequisite to cognitive and conceptual development, and as a consequence to our constituting of reality which in turn constitutes the starting point for everyday praxis (Ole Petter Opsand 1976 in Skutnabb-Kangas 1981:199).

And because

> Language is our most important instrument for forming concepts. It is the tool the individual uses when she handles her surroundings, in order to be able to take the world to herself, to grasp it, and comprehend it. The instrument must be well developed, both so that the greatest possible cognitive (intellectual) growth can take place (Cummins 1976b, 1978a), and also to make possible the analysis of self, and of the outside world, and of the relationship between the two (Skutnab-Kangas 1981:3).

Besides the above cognitive considerations, the adoption of the Turkish language as the medium of instruction in all universities will enhance its status and promote its further development. Turkish needs that because the current policy which restricts its use at university level gives the impression that Turkish cannot be employed in advanced academic discourse. It certainly affects its respectability and leads to the following objection.

Turkish has traditionally been alleged to be inadequate in meeting the demands of a scientific vocabulary. Some people even take the view that certain concepts cannot be expressed in Turkish.

But does this supposed linguistic inadequacy not reflect a larger educational inadequacy? To complain, as writers and translators do, about the inadequacy of the Turkish language when it comes to handling abstract and scientific concepts, is to overlook the fact that the language did go through periods of development and change which saw the publication of great works in the not too distant past. So why should the language not develop yet again and catch up with modern times?

The real issue is whether the conditions for such a revival can be met. Now these conditions have more to do with educational and economic policies than with linguistic considerations. For a country to switch from a traditional agricultural economy to a modern industrial economy, and from minority to mass education, enormous amounts of human and capital resources must be mobilized over a long period of time. When policy-makers have neither the resources nor the time, it is all too tempting to go for the

easy solution and import wholesale a western educational package.

It is not very surprising that the claims relating to the inadequacy of the Turkish technical vocabulary when used as a medium of instruction at university level came to be increasingly heard in the last decade or so. In a country where foreign schools had long been established and had trained many of the ruling elites, there was a lot of prestige attached to second languages, first French, now English. So much so that the case for the superiority of English became a self-fulfilling prophecy. With education in the second language becoming more sought after, the need to put effort into modernizing the first language became unnecessary. As Dorian (1982:47) puts it, "language loyalty persists as the economic and social circumstances are conducive to it, but if some other language proves to have greater value, a shift to the other language begins".

As Fishman (1977:37) has indicated, when a language moves into functions for which it was not previously accepted or employed its modernization becomes necessary, if it is to be able to fulfil its new roles.

Thus Turkish should be allowed to develop by putting it to use as the medium of education in universities. Only in this way can the alleged inadequacies of Turkish be overcome. As Rugemalira et al. (1990:30) explain

> To the extent that human beings can express their experience through language then any language can be used. In this regard, no language is inherently inade-quate. Living languages continuously change to accommodate developments experienced by the relevant speakers. ...as long as a need to express something exists, a way of expressing it will inevitably be found by the speakers.

Unfortunately, it seems that current policy in Turkey thwarts such developments.

Probably the best answer to arguments against the use of Turkish as the medium of instruction would be a Turkish-intrinsic-extrinsic-functional approach of the kind adopted to promote English around the world (see section 3.9.1).

Turkey has a population of 56 million people (1990 census) and almost 90% of the population speak Turkish. Kurdish and Armenian constitute minority languages spoken by approximately 10% of the total population. It should also be noted that the use of Turkish cannot be confined to Turkey as it is widely spoken in various parts of the world like Bulgaria, former Yugoslavia, Greece, Iran and a number of former Soviet Union Republics, Azarbaidjan and Georgia. Additionally, over three million Turkish workers in Germany and 150,000 speakers of Turkish in Britain form a widespread Turkish-speaking population.

Regarding the structure of the language, the syntax of Turkish is quite different from the languages belonging to the Indo-European family. Being a member of the Ural-Altaic language family, Turkish shares some basic features with other languages like Finnish and Hungarian. One of these features is agglutination which presents a con-siderable difficulty for English-speakers although to some extent it also occurs in English as in *tastelessness*. However, in Turkish the construction of one word by adding suffix to suffix may be the equivalent of a whole English phrase, clause or sentence. For instance; *sokaktakiler* (the people in the street) or *bayramlasamadiklarimiz* (those of our number with whom we cannot exchange the season's greetings) (Lewis 1967). Lewis (1967) while comparing English with Turkish, states that

> Our English sentences are like drystone walls, with one chunk of meaning dropped into place after another. The Turk's ideas are laid in place like bricks, each cemented to the next.

We would also like to quote Muller (1866:343-344) who points out that

> It is a real pleasure to read a Turkish grammar, even though one may have no wish to acquire it practically. The ingenious manner in which the numerous grammatical forms are brought out, the regularity which pervades the system of declension and conjugation, the transparency and intelligibility of the whole structure, must strike all who have a sense of that wonderful power of the human mind which has displayed itself in language.

We believe that using English as a medium of instruction in Turkey will probably not lead to the complete loss of Turkish, since a majority of people will continue to use it. However, it adds weight to to the erroneous argument that the linguistic inferiority of Turkish is somehow connected with the economic underdevelopment of the country. By reproducing the quotations above, we wanted to make it clear that Turkish is not inferior to any other language -and not superior either. It has an extraordinary degree of flexibility and expressiveness with great potentialities. The only thing to do is to realize this capacity and concentrate on its development so that it can satisfy the needs of the Turkish nation in every situation, in political and economic communication, in social life and in education.

To sum up, despite all the arguments in favour of English, there is a very strong case for Turkish. We believe that instruction should be in Turkish in order to encourage individual creativity and to avoid a communication gap between intellectuals and ordinary people. We would argue that accepting English as the medium of intellectual activities and putting Turkish into a subordinate position may well contribute to arresting home-grown linguistic and intellectual developments in Turkey.

CHAPTER 4

METHODOLOGICAL RATIONALE AND RESEARCH METHOD

4.1 INTRODUCTION

The three preceding chapters have identified and discussed the theoretical and practical issues behind the implementation of the immersion model in North America, and behind its transfer to the very different socio-cultural context of Turkey.

The stage is now set for the survey undertaken at Middle East Technical University (METU), Ankara, Turkey. This chapter begins with a statement of research design, working hypotheses and rationale for the study. It then presents the investigative methods used as well as the setting and subjects of the study.

4.2 RESEARCH DESIGN

The purpose of this study is twofold: first, to assess the effectiveness of CBSLI in the Turkish context from the perspectives of students and teachers, and second, to cross-check students' and teachers' evaluations with an investigation into what actually goes on in a classroom situation.

The study is designed as a combination of qualitative and quantitative approaches. It is qualitative because, as Seliger puts it, it is concerned with providing insights into "phenomena that occur naturally, without the intervention of an experiment or an artificially contrived treatment" (1989:118). It attempts to "present the data from the perspectives of the subjects or observed groups, so that the cultural and intellectual biases of the researcher do not distort the collection, interpretation, or presentation of data" (Jacob 1987 in Seliger et al. 1989:118).

While using procedures which are typically found in qualitative research, such as observation and tape recording, the study is also quantitative in that the data obtained from questionnaires are processed quantitatively and qualitatively in terms of frequency orders.

The reasons why such an approach has been chosen are as follows:

1. Much second language acquisition research is concerned with classroom learning, to which it is not easy to apply the controls necessary for experimental research. Initially, second language research was concerned with demonstrating the superiority of one method or approach to second or foreign languages over others. For example, in the 1960s several studies tried to show the superiority of the audio-lingual method over the grammar-translation method. These studies, conducted within an experimental or quasi-experimental framework, were very ambitious and cumbersome and, in the final analysis, demonstrated very little about the relative efficacy of one method over another. Dissatisfaction with this kind of methods comparison research, and the realization that perhaps more was involved in the effects of instruction than merely teaching method, led researchers to seek more effective ways to investigate language acquisition in the classroom.

2. There has been an increased use of qualitative or ethnographic research approaches in psychology, education, communication and discourse analysis. Although qualitative research methods do not control all variables, the development of rigorous methods for data collection and analysis have produced results that would not be possible through experimental designs.

3. There has been a growing concern in second language research about the interactive or distorting effects of the research setting on the kind of language data collected. Experimental settings, being controlled and artificial, may elicit data different from those produced in natural settings (Seliger et al. 1989:119).

Until very recently, the effectiveness of CBSLI has been gauged by methods comparison research of the kind criticized by Seliger. Researchers investigated the effects of content-based second language instruction programmes on student learning performance, as measured by standardized proficiency tests or instruction-related achievement tasks. And then they compared such results with those obtained from programmes where content and second language skills are taught separately. Such comparative studies have proved inconclusive largely because they failed to describe what really happens in the classroom. This is why this study seeks to combine qualitative and quantitative approaches.

4.3 THE NEED FOR AN EFFICIENCY ASSESSMENT

The original motivation in undertaking this study was to remedy the absence of any research on immersion in Turkey. Two years of research backed up with first-hand observations in North America have provided us insights into the theory, practice and assessment of immersion programmes. They have also helped us to formulate the working hypotheses for the task at hand.

The first such hypothesis is that students might be expected to find reading and listening in English the least troublesome skills to acquire. However, if comprehensible input is one, perhaps the main one, of the necessary conditions for successful second language learning, and if in Turkey language input is only provided through non-native speaking instructors, and through reading materials, then that condition is not fully met, and language learning must be adversely affected.

Secondly, if the comprehensible output theory requires that in addition to comprehensible input, students should be given ample opportunities to develop their communicative competence, the fact that Turkish students live in a Turkish environment, and have limited, if any, opportunity to interact with native speakers, would not be likely

to boost their communicative competence.

Thirdly, if due to a lack of confidence in their productive skills, students would not be willing to initiate or participate in any classroom discussion, language learning would further be impaired.

Fourthly, if notwithstanding the problems accruing from English-medium education, staff and students still preferred English to Turkish-medium education, this could not be ascribed to the merits of CBSLI but to an almost obsessive desire in Turkish society to learn English.

4.4 RATIONALE FOR THE STUDY

The field study was conducted to collect information from a large group of students and teachers in Middle East Technical University, Turkey, about their assessment of content-based second language instruction in their university. The specific objectives of the study included:

[1]   obtaining a description of existing CBSLI programmes at METU;

[2]   collecting data on how second-year university students rate themselves with respect to their English language proficiency, to their academic skills, to what their attitudes are to instruction in English and to how they evaluate instructors and English language medium instruction at METU;

[3]   gathering data on instructors at METU with respect to their English proficiency, to their attitudes to teaching in English and to the problems they face when using English as a medium of instruction;

[4]   obtaining a detailed description of the extent to which the objectives of a CBSLI programme are pursued and achieved by observing and recording real classroom activities/interaction at METU.

4.5 METHODS OF DATA COLLECTION

Several methods are used in this study. It is believed that because data are collected from different sources and with different means such as questionnaires, observations and tapes, this study can provide insights not available through research methodologies dependent on a single approach such as an experiment or a test.

Data for the present study were collected over a period of four weeks in the autumn of 1991. Permission to carry out this research was granted by the Rectorship of METU. In addition, permission from the heads of each of the four departments was also sought and obtained. Students were informed about the purpose of this study before they filled out questionnaire forms during class time.

4.5.1 Questionnaires

In this study two separate questionnaires -one for teachers and one for students- were designed. In addition to background information on sex, age and time spent on studying English, students were asked to rate their English proficiency in four basic skills and in language related academic tasks. They were also asked about their attitudes to having to learn in a second language. And finally, they were asked to evaluate their instructors and CBSLI in general.

As for the teachers' questionnaire, teachers were asked to rate their English proficiency and to give their opinions on English-medium education. Further information was elicited on classroom activities.

Questionnaires permitted anonymity. This was in order to increase our chances of receiving responses that genuinely represented subjects' beliefs and feelings.

The questionnaires were prepared in English. They were drawn from a number of sources (Tucker 1978, Light et al. 1991, Snow et al. 1986). After consulting members of

the Social Psychology Research Unit at the University of Kent at Canterbury, the neces-
sary changes were made and the questionnaires were translated into Turkish by the author
of this study. However, additional care had to be taken in translating in order to remove
ambiguity and to achieve the degree of precision necessary to ensure that subjects under-
stood exactly what we were asking. Therefore, further revisions on the translations were
done by teaching staff at the Faculty of Education, Cukurova University, Adana, Turkey
and by the Director of the Institute of Social Sciences, METU for the accuracy and
appropriateness of the questions. The final forms were checked and printed in Ankara
(see Appendices A and B).

4.5.1.1 Why Student and Teacher Evaluation?

The practice of asking students and teachers to evaluate the effectiveness of a
specific programme has only recently become widespread especially in colleges and
universities. Although self-assessment has been used for a number of years in such fields
as psychology and sociology, researchers in second/foreign language learning and teach-
ing have long been skeptical of students' capacity to make accurate judgements about
their own learning and about their achievements.

This skepticism seems to be unfounded. A number of studies report evidence of the
stability and reliability of students' evaluations. For instance Oskarsson (1980) cites stu-
dies which show that students' self assessments are a reliable source of information about
the quality of instruction. Aleamoni (1987) finds evidence of the stability of students'
evaluation in studies which show "a high positive relationship between the judgements
made by students who had been away and those made by students who were currently
taking the course" (p.28).

Following Aleamoni (1981), students were asked to evaluate the effectiveness of
Turkish style immersion because

[1] Students are the main source of information about the accomplishment of important educational goals, areas of rapport, degrees of communication, and the existence of problems between instructors and students.

[2] Students are the most logical evaluators of the quality and effectiveness of course elements such as instructors, texts, homework, course content, and general student attitudes toward the course.

[3] Student ratings provide a means of communication between students and instructor which, in turn, may raise the level of instruction or stimulate the institution to consider its overall goals and values.

[4] Student ratings provide information (if published) to students about particular courses and instructors, which may increase the chances that excellence in instruction will be recognized and rewarded (p.111).

In short, self-assessment questionnaires involve students and teachers to a much higher degree than other instruments. And this is why, given the objectives of this study, they were deemed to be the best means of evaluating CBSLI programmes in Turkey.

4.5.2 Classroom Observation Data

To investigate what is actually happening and what kind of learning opportunities arise in the classrooms, a two-hour lesson from each department was observed and taped. The initial aim was to videotape all the classrooms but after one attempt that option had to be dropped because the classroom size and the number of students in the classrooms (which was 60 in the Department of Architecture, 45 in the Department of Sociology, 70 in the Department of Economics and 34 in the Department of Chemical Engineering) made it virtually impossible to videotape the lessons. Instead, we used two sensitive tape-recorders and taped classes as unobtrusively as possible.

In order to minimize the difficulty of understanding the lesson content and identifying the various speakers -the latter could be done only to some extent since, for the most part, the speaker is unidentifiable due to background noise and again to the number of the students- each lesson had to be transcribed within two days of the recording.

4.5.2.1 Why Classroom Observation?

The use of observation as a data collection procedure has been gaining attention with the recent emphasis on classroom research.

Classroom observation can be used as a means of collecting information on a variety of topics such as teacher evaluation and student achievement. In addition, classroom observation is an indispensable tool to determine to what extent the theory of language teaching is put into practice in classroom settings. Particularly, if one claims that second language classrooms are central to language development since it is the place where this occurs in foreign language contexts, then it is clear that one should go into the class and observe what is really happening and how the language development is being brought about.

One might argue that other techniques can be used for collecting information on such issues, like interviews or diary studies and questionnaires. However, we believe that in order to get an accurate description of classroom processes, interviews, questionnaires and classroom observation should be regarded as complementary to each other. And if, at the end of the day, the information obtained from the questionnaires and the information from classroom observation are consistent, then the researcher will conclude that the picture emerging from his/her evaluation is a reliable one. That is what this study aims to do: to gather information from both questionnaires and classroom observation in order to have adequate data and to see if they back up our theoretical reservations concerning immersion practice in Turkey.

4.6 THE SETTING

The Middle East Technical University may well be an ideal setting for this study since it is known as one of the most prestigious universities in Turkey largely because its medium of education is English. Since its inception in 1956, the language of instruction has been English and as an indication of the quality of education given at the university its graduates are sought after in both public and private sectors.

The University has a population of 19,000 students including 2,500 graduate students and 3,300 preparatory school students in 5 Faculties, 3 Graduate Schools, and 1 School of Foreign Languages (METU Undergraduate Catalog, 1990-92). Depending upon their results in an English language proficiency exam, students either receive one-year preparatory intensive English teaching, or enter the university directly and follow the mainstream curriculum.

The School of Foreign Languages comprises two departments: the Department of Basic English and the Department of Modern Languages. The Department of Basic English offers a preparatory year English programme the main objective of which is "to give students the English language skills they will need to pursue their specialized courses in different departments of the University. To achieve this aim, emphasis is placed on reading, writing and listening comprehension skills as well as the formal grammar of the language" (METU Catalog p.8).

However, the validity of a focus on reading, writing and listening skills, leaving out the speaking skill, is highly questionable. First of all, although it may be argued that these three skills are of primary importance in the Turkish context it is very limiting. And secondly, it does not pursue the main objective of CBSLI or of any communicative-oriented approaches in language teaching which see two-way communication as the primary function of the language. Particularly in a university setting, students should be

able to develop the skills necessary to take part in academic debate. But as it appears from the above stated objectives of the preparatory year in METU, the aim is to treat students as recipients of information by pouring knowledge into their brain rather than to empower them to engage in discursive activities.

4.7 THE SUBJECTS

The subjects include instructors and second-year students in four departments in four faculties: the Department of Architecture in the Faculty of Architecture, the Department of Sociology in the Faculty of Arts and Sciences, the Department of Economics in the Faculty of Economic and Administrative Sciences and the Department of Chemical Engineering in the Faculty of Engineering. The population surveyed numbers 186 second-year students and 41 instructors. Tables 4.1 and 4.2 provide information on the distribution of students and instructors by departments and sex.

TABLE 4.1 DISTRIBUTION OF STUDENTS BY DEPARTMENTS AND SEX					
	Architecture F %	Sociology F %	Economics F %	Che. Eng F %	Total F %
M	20 54.0	19 42.2	43 61.4	23 67.6	105 56.4
F	17 45.9	26 57.7	27 38.5	11 32.3	81 43.5

As the table above shows there were slightly more males than females in the study (105 versus 81, respectively). The average age for students was 21. Students ranged in age from 18 to 26 or above. More than 50% of students said they had been studying English, either as a subject or as a medium of instruction, for 7 to 11 years. Distribution of students by time studying English is given below.

TABLE 4.2

DISTRIBUTION OF STUDENTS BY TIME STUDYING ENGLISH

(either as a subject or as a medium of instruction)

	Architecture F %	Sociology F %	Economics F %	Che. Eng. F %	Total F %
1	6 16.2	9 20	11 15.7	3 8.8	29 15.5
2	1 2.7	14 31.1	2 2.8	9 26.4	26 13.9
3	17 45.9	6 13.3	24 34.2	3 8.8	50 26.8
4	4 10.8	5 11.1	26 37.1	10 29.4	45 24.1
5	0 0.0	0 0.0	5 7.1	5 14.7	10 5.3

1= 1-3 years
2= 4-6 years
3= 7-9 years
4= 10-11 years
5= 12-above

Of instructors who took part in this study 13 were female and 28 were male. They ranged in age from 25 to 51. Around 60% had between 16 and 20 years teaching experience. And out of 41, 32 had Ph.D's and 8 had masters' degrees.

After this presentation of the rationale design of the research method, we shall examine in the next two chapters the data obtained from the various surveys and see what conclusions may be drawn from them.

CHAPTER 5

CBSLI EVALUATED BY STUDENTS AND TEACHERS AT METU:

ANALYSIS OF QUESTIONNAIRE DATA

5.1 INTRODUCTION

In this chapter, we will present and analyze the data obtained from the students' and teachers' questionnaires under the following three headings: 1) English language and study skills, 2) Academic performance, 3) Attitudinal considerations.

The findings pertinent to each heading will be discussed with reference to North American immersion programmes since these are primary examples of applied CBSLI principles.

5.2 ENGLISH LANGUAGE AND STUDY SKILLS

Since recent studies show the reliability of self-rating in the evaluation of foreign language skills, in this study, second-year students at METU were asked to assess their listening, speaking, reading, writing and related study skills in English using a series of subjective scales.

5.2.1 Assessment of Listening and Listening-related Study Skills

To most Turkish students, mastering the art of listening is crucial since their success in an English-medium university largely depends upon their ability to comprehend teachers' lectures delivered in that language. However, this dependence on teachers' lectures raises two important issues with regard to the provision of "comprehensible input" when CBSLI programmes in North America are compared with their Turkish counterpart.

When looking at the nature of listening comprehension, Nunan (1991) rejects the notion of 'listener as tape recorder'. Instead, he argues that "in comprehending aural language, listeners do a great deal of constructive and interpretative work in which they integrate what they hear with what they know about the world" (p.38). Now what do Turkish students bring to the listening comprehension task by way of background knowledge of the world? Does school and the preparatory year provide them with anything like the interpretative grid which their North American counterparts bring to CBSLI? If it is not the case, then they must feel handicapped when listening to lectures and this feeling must be reflected in their answers to the questionnaire.

Nunan also suggests that a distinction between interactive and non-interactive listening comprehension should be made since different listening skills are required to take part in interactional and non-interactional tasks. For example, while interactional tasks might involve speaking as well as listening, non-interactional tasks only require listeners to comprehend monologues. Here the contrast between the North American and Turkish varieties of listening comprehension is a stark one. The North American is interactional while the Turkish is non-interactional. Not only do North American students interact with teachers and with one another, but they also enjoy extra listening opportunities (radio, television, native speakers) which are not available to Turkish students. Thus Turkish CBSLI offers restricted comprehensible input and this must have a detrimental effect on listening comprehension which in turns would be reflected in answers to the questionnaire.

As a matter of fact only 16% of the students surveyed reply that they can "understand everything that is said by non-native as well as by native speakers". A sizeable 37% say that they can "understand everything that is said by non-native speakers but not everything that is said by native speakers." An even more sizeable 43% reckon that they can "understand most (but not all) of what is said". There are even 2.6% who ack-

nowledge that they can "understand only a few words" and .53% (one student) nothing at all.

These responses are very much in line with expectations based on the fact that Turkish students lack opportunities to hear native speakers of English and to engage in interactional listening activities.

Surprisingly, an examination of the distribution of answers by departments reveals that the most divergent responses come from the two Social Sciences departments, and not from departments in different Faculties. While 62% of Sociology students say that they can understand most of what is said, only 31% of Economics students feel up to it. Conversely, 6.6% of Sociology students as against 24% of Economics students claim that they understand everything that is said by Turkish as well as by native speakers. Such huge discrepancies between departments in the same faculty may not be accounted for by differences in teaching styles, as would be the case between departments in Natural Sciences and Social Sciences. The reason must lie elsewhere. It may be that higher scores from Economics students are due to the fact that they are the ones who had the longest experience with English language education before they entered university[3] Which would be consistent with Nunan's first point that effective comprehension is a function of what prior knowledge of the world (here the English world), the listener brings to the task of interpreting new messages. Another possible explanation might be that economics resorts more to non-verbal communicative reinforcements like graphics than sociology does.

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[3] Distribution of students by time studying English either as a subject or as a medium of instruction is given in Chapter 4.

TABLE 5.1 PROFICIENCY IN ENGLISH (LISTENING)									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	0	0.0	0	0.0	0	0.0	1	2.9	1	.53
2	2	5.4	0	0.0	0	0.0	3	8.8	5	2.68
3	17	45.9	28	62.2	22	31.4	13	38.2	80	43.01
4	13	35.1	14	31.1	31	44.2	11	32.3	69	37.0
5	5	13.5	3	6.6	17	24.2	6	17.6	31	16.6

1= not at all
2= only a few words
3= enough to understand most (but not all) of what is said
4= I understand everything that is said by Turkish people but
   not everything that is said by native speakers
5= I understand everything that is said by Turkish as well as
   by native speakers

Now we must go beyond basic listening performance and consider how it reflects on listening-related study skills needed to master the subject matter in English.

Students were asked to evaluate their ability to get the essential information when taking lecture notes.

As shown in Table 5.2 below, a clear majority of students rated their ability as "average" and "above average" (39% and 28% respectively). However, the percentage of those who reported an "excellent" level was only 9% and up to 18% reported having a "below average" level in this academic skill, and 4% a "poor" level.

The relatively high percentage of "average" and "above average" answers may well suggest that for a majority of students "getting the essential information when taking lecture notes" does not constitute an important problem. But the fact remains that a significant minority -up to 22.5%- admit that they have a "poor" or "below average"

level. Together with the unimpressive listening results, this would suggest that listening and listening-related academic skills do pose a problem for a considerable number of students. Quite obviously the special emphasis placed on improving students' listening and lecture note taking skills in the preparatory year, does not altogether make up for the lack of an interpretative-constructive grid which can only be acquired through years of practice.

Here, it is between the Departments of Sociology and Chemical Engineering that responses differ substantially. Around 47% of Sociology students rate themselves as "average" as opposed to 29% of Chemical Engineering students. On the other hand, 20% of Chemical Engineering students consider their ability as "excellent" against a low 4% of Sociology students. One possible explanation is that students in the Department of Chemical Engineering have the benefit of additional non-verbal support like physical instruments in the laboratory, something which Sociology students have not. While all the information comes through the exclusively verbal medium of teacher's lectures in Sociology, students in the Department of Chemical Engineering have the extra visual back up demonstrations. Not only do these help clinch the main points but, being simultaneously verbalized, they also provide a second chance to get the main lecture points.

TABLE 5.2

GETTING THE ESSENTIAL INFORMATION

WHEN TAKING LECTURE NOTES

	Architecture		Sociology		Economics		Che.Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	3	8.1	3	6.6	2	2.8	0	0.0	8	4.3
2	5	13.5	9	20	13	18.5	7	20.5	34	18.2
3	15	40.5	21	46.6	27	38.5	10	29.4	73	39.2
4	11	29.7	10	22.2	21	30	10	29.4	52	27.9
5	3	8.1	2	4.4	6	8.5	7	20.5	18	9.6

1= poor 2= below average 3= average 4= above average 5= excellent

How does this self-evaluation correlate with the perception of the part played by CBSLI in this respect? Do students observe any improvement in their listening-related academic skills since taking their content courses in English?

Students were asked to say whether their ability to understand lectures had been improved. Only 12.9% reported "no improvement" whereas around 63% reported some "improvement". Answers here are far more positive than with either of the two questions relating to listening performance. This discrepancy might suggest that even students who are not happy with their listening ability do not ascribe their poor performance to CBSLI as such, blaming themselves rather than CBSLI for it, and that however inadequate their progress, they feel they owe such progress to CBSLI.

When we look at the distribution of positive answers, the highest "improved" score (77.7%) comes from Sociology students, followed by those in Economics with 70%, and by those in Architecture, 54%, and the lowest (38%) being from students in the Chemical Engineering Department.

The fact that it is in Sociology that most students feel that their listening comprehension is less than excellent, and also feel that their progress owes most to CBSLI is not as paradoxical as might appear at first sight. Being an exclusively verbal subject involving a high degree of conceptualization of social phenomena, sociology requires more than any other subject the kind of prior world knowledge referred to by Nunan as a sine qua non of interpretation and comprehension. Most students will not be aware that CBSLI cannot make up all the deficit that they may have in this area. But they will be aware of the progress made and, despite their frustration at not being able to understand all, will tend to ascribe their progress to sheer exposure to CBSLI.

The lowest "improved" score from the Chemical Engineering Department suggests that CBSLI does not contribute much to students' understanding of lectures. The reason is that, as indicated earlier, chemistry is a less verbal subject than others such as sociology, and relies more on visual demonstrations and non-verbal coding. Hence the awareness of the limited opportunities in Chemical Engineering to develop listening comprehension skills.

TABLE 5.3 UNDERSTANDING LECTURES									
Architecture		Sociology		Economics		Che. Eng.		Total	
F	%	F	%	F	%	F	%	F	%
1	4	10.81	2	4.4	11	15.7	7	20.5	24	12.9
2	20	54.0	35	77.7	49	70	13	38.2	117	62.9

1= same as before   2= improved

Now we move on to another academic skill: the ability to understand discussions. Do students feel it is better now because their content courses are all conducted in English?

60% of all students answer "yes" to this question, 68% of Sociology and Economics students, 47% of Chemical Engineering students, and 45% of students in Architecture report some "improvement". The "no improvement" scores are distributed between the departments as follows: 18% Architecture, 18% Economics, 13% Sociology and 11% Chemical Engineering. Table 5.4 below sets out the results.

An examination of the distribution of answers by departments shows that students in the two Social Sciences departments claim to have benefited most from CBSLI in this respect. The reason might be that they are likely to have had more opportunities to listen to and/or participate in discussions due to the more discursive nature of their main subject. Students in the Departments of Chemical Engineering and Architecture, on the other hand, seem to be getting the least help from CBSLI in terms of improving their listening and listening-related study skills in English. Although one might think that laboratory work involves more student interaction in English than other subjects, we have found that this is not the case. On the basis of our classroom observations and our conversations with students, we can state that interaction between students or between students and teacher -particularly in the Architecture Department where small groups of students work on projects- takes place in Turkish, and not in English.

TABLE 5.4 UNDERSTANDING DISCUSSIONS				
Architecture F %	Sociology F %	Economics F %	Che. Eng. F %	Total F %
1 7 18.9	6 13.3	13 18.5	4 11.7	30 16.1
2 17 45.9	31 68.8	48 68.5	16 47.0	112 60.2

5.2.2 Assessment of Speaking and Speaking-related Study Skills

Only recently, with the development of the comprehensible output hypothesis, speaking has become the focus of attention in CBSLI programmes. The main argument behind this hypothesis is that while comprehensible input is a necessary component of second language acquisition, language proficiency cannot accrue solely from the input received. As Swain argues, the learner should be given opportunities to produce the target language by interacting and negotiating meaning in that language. And it is assumed that CBSLI classrooms should be ideal settings to provide learners with genuine opportunities to engage in communicative interaction.

However, we do not think that this is possible in Turkey. Turkish students live in a Turkish environment and they have little opportunity to engage in any meaningful communicative activity in English. As indicated earlier, interacting with native speakers of English in or outside the classroom is out of question in Turkey because there is no native-speaker to interact with. This shortcoming is compounded by the fact that authorities at METU provide no room for the development of speaking skills in the curriculum for the preparatory year.

Under these circumstances how do Turkish students assess their speaking skills in English?

The expectation that students would rate their level of achievement as lower than in the other skills is confirmed. Only 9% of students claim they can "speak fluently" while 35% reckon they can speak "well enough to communicate most ideas" and 36% "well enough to communicate simple ideas and requests." The percentage of students admitting that they can speak "only a few words" is 4.3%. Worse still, up to 14% of students are prepared to say that they cannot speak at all. The results are shown in Table 5.5.

By their responses, students effectively suggest that their speaking ability in English lags far behind their listening ability. A possible explanation, which will be confirmed by answers to other questions further on, is that although students are given opportunities, albeit inadequate, to listen to English, their chances to take part in communicative activities in class are more limited. Besides, they get no training in speaking during their preparatory year, which is a clear indication that speaking is not one of the main objectives of the system anyway. This must reflect on the implementation of CBSLI and on its effectiveness in terms of language teaching since it fails to observe the main tenet of communication-oriented language teaching, that is, one learns to write by writing and to speak by speaking. As Genesee (1987:184) points out "using language productively is particularly important when studying academic material because talking about such material gives the learner an opportunity to analyze, manipulate, and evaluate it. ... passive comprehension is probably insufficient for true assimilation and retention of new information". But, quite obviously, using language productively, as Genesee put it, is not taken to be a goal worth pursuing at METU.

The most divergent answers come from the Departments of Sociology and Economics again. While more than 22% of Sociology students claim they cannot speak at all, only 8.5% of Economics students do so. The percentage of those who claim they can speak fluently is only 2.2% in Sociology whereas it is around 16% in Economics. These findings indicate that students in the Department of Economics have comparatively high self-confidence in their speaking -and listening- skills. They also point to the fact that Sociology students need to have a greater command of complex sentence structure in order to engage in meaningful verbal exchanges about conceptually complex sociological issues.

TABLE 5.5 PROFICIENCY IN ENGLISH (SPEAKING)				
Architecture F %	Sociology F %	Economics F %	Che. Eng. F %	Total F %
1	5 13.5	10 22.2	6 8.5	5 14.7	26 13.9
2	1 2.7	1 2.2	4 5.7	2 5.8	8 4.3
3	14 37.8	22 48.8	19 27.1	13 38.2	68 36.5
4	15 40.5	11 24.4	30 42.8	10 29.4	66 35.4
5	2 5.4	1 2.2	11 15.7	4 11.7	18 9.6

1= not at all
2= only a few words
3= well enough to communicate simple ideas and requests
4= well enough to communicate most ideas
5= I can speak fluently

In order to elicit more evidence in relation to their speaking skills, students were asked to judge their ability to participate in class discussions. About as many rated it "poor" as rated it "below average" (29.5% and 30% respectively). Fewer assessed it as "average" (27%) while only 9% set it "above average" and only a tiny 3% claimed they had an "excellent" ability to participate in class discussions. The answers are listed in Table 5.6 below.

That up to three students in five should rate their ability to participate in class discussions as either poor or below average should be a matter of concern for advocates of CBSLI in Turkey. For not only does Turkish style CBSLI fail to develop an essential linguistic skill, it also fails to develop a crucial cognitive skill -the desire and ability to question, manipulate, explore new knowledge. If students are not to continue being linguistic cripples, and if their command of subject-matter is to be improved, then Turkish CBSLI must provide what North American CBSLI does: not just comprehensible input but proper stimuli for the production of comprehensible verbal output. Verbal

interaction must be seen to be valued and therefore have equal status and place (in the preparatory year and beyond) to the other three skills.

An examination of the poorer department score confirms the above observation. The highest percentage of "poor" answers comes from the students in the Department of Chemical Engineering (41%). No student in this department rates himself as "excellent" either. The most likely explanation is that students are required to function through a restricted set of language skills and there is no demand made to encourage the learners to produce the target language. The fact that it is in the nature of the subject to rely on a significant amount of nonverbal signs does not altogether mean that no verbal interaction need take place. Quite the contrary.

TABLE 5.6 PARTICIPATING IN CLASS DISCUSSIONS									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F	%
1	8	21.6	15	33.3	18	25.7	14	41.1	55	29.5
2	9	24.3	14	31.1	20	28.5	13	38.2	56	30.1
3	15	40.5	11	24.4	20	28.5	5	14.7	51	27.4
4	4	10.8	3	6.6	9	12.8	2	5.8	18	9.6
5	1	2.7	2	4.4	3	4.2	0	0.0	6	3.2

1= poor 2= below average 3= average 4= above average 5= excellent

Another question asked students how helpful CBSLI had been with enabling them to participate in classroom activities.

Not unexpectedly students' responses are preponderantly negative. 26% of students are of the opinion that CBSLI has "not been helpful at all" and a relatively high percen-

tage of students (31.7%) believe that CBSLI has only been "slightly helpful". Fewer students (23%) say it has been "helpful", fewer still (12%) consider it "very helpful" and hardly 6% regard it as "extremely helpful".

With this question we wanted to find out whether a receptively biased CBSLI was perceived as playing any positive part in helping solve students' difficulty with participating in class discussions. The fact that the ratio of negative answers (58%) closely correlates with the ratio of negative answers to the previous question clearly indicates that students' own perceptions confirm the predictable failings of an almost exclusively input driven CBSLI.

The distribution of these largely negative views show no significant difference between departments. The consensus is that Turkish CBSLI is not regarded as of much help in developing what, in North American CBSLI, is an all important linguistic and cognitive skill.

TABLE 5.7 ABILITY TO PARTICIPATE IN CLASSROOM ACTIVITIES									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	13	35.1	13	28.8	12	17.1	11	32.3	49	26.3
2	11	29.7	18	40	22	31.4	8	23.5	59	31.7
3	7	18.9	10	22.2	18	25.7	8	23.5	43	23.1
4	5	13.5	2	4.4	13	18.5	4	11.7	24	12.9
5	1	2.7	2	4.4	5	7.1	3	8.8	11	5.9

1= not helpful
2= slightly helpful
3= helpful
4= very helpful
5= extremely helpful

After getting students' self-assessment scores in speaking and speaking-related study skills, we asked them if they observed any improvement in these skills since taking their content classes in English. The first such question was related to their ability to participate in class discussions.

51.6% of all students reply "no" to this question. It is a significantly high "no improvement" response. The message is that although students at METU feel they can listen, read, and write reasonably well, when it comes to discussions, to communicating their ideas orally, they balk. This fact is specially sad because it is not primary school we are talking about, it is University where students are supposed to engage in lively conversations and discussions; where they are expected to be active and creative. By acknowledging "no improvement", 54% of Economics students as well as 53% of Sociology students effectively say that METU style CBSLI has failed in this respect. 50% of students in Chemical Engineering and 45% of Architecture also report "no improvement".

Only 8% of students in Chemical Engineering and 19% of students in Architecture feel their ability to participate in class discussions have improved. This percentage rises to 29% for Sociology students and to 32.8% for students in Economics. The findings are given in Table 5.8.

TABLE 5.8 PARTICIPATING IN CLASS DISCUSSIONS									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F	%
1	17	45.9	24	53.3	38	54.2	17	50	96	51.6
2	7	18.9	13	28.8	23	32.8	3	8.8	46	24.7

The next academic skill students were asked to evaluate was "presenting oral reports". 38% of all students, against 33%, are of the opinion that presenting oral reports

is still difficult for them and CBSLI has not contributed to improving their ability in this respect. The 54% "no improvement" answers from Economics students are particularly significant since the very same students earlier claimed to have a relatively higher speaking proficiency. Apparently, they do not believe that CBSLI contributed much to their present level of mastery in this respect.

These responses can be regarded as consistent with those relating to general speaking skills. They confirm the fact that students' limited ability in speaking skills does appear to be a serious impediment to their effective functional use of English for academic purposes.

TABLE 5.9 PRESENTING ORAL REPORTS									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F %
1	10	27.0	20	44.4	32	45.7	9	26.4	71 38.1
2	11	29.7	17	37.7	25	35.7	9	26.4	62 33.3

In short, there is substantial evidence that students' lack of proficiency in speaking English has a detrimental impact on their ability to participate in any communicative academic activity. Such findings starkly expose the shortcomings of CBSLI programmes at METU. In the first place, these programmes fail to implement some of the major theoretical principles underlying North American CBSLI: the need for comprehensible output and the importance of developing oral skills in foreign language learning. Secondly, by not encouraging students to speak in the classroom they effectively discourage one of the most potent cognitive strategies for genuine subject-matter learning.

5.2.3 Assessment of Reading and Reading-related Study Skills

Reading requires an interaction between text and reader's previous knowledge or expectation of the subject matter. This is in effect the principle behind CBSLI, the principle of relating the language being taught to the context which carries it.

Accordingly, at METU, reading is seen as an effective means of extending students' command of English and at the same time of conveying the content. Thus, the focus of interest is neither language nor content, but both.

In order to enable its students to become effective readers, METU offers training in reading during the preparatory year. In addition, all freshers are required to take two courses, "Development of Reading and Writing Skills" and "Advanced Reading" or "Academic Report Writing". In these courses, the objective is to reinforce reading and writing skills through various reading strategies applied to different types of texts.

Given this special emphasis on reading (to the exclusion of speaking), we asked students to rate their reading ability.

While 14% of the student population claim they can "read like native speakers", 60% rate themselves as "understanding most of what they have read". But a sizable 22% reckon they can "understand half of what they read with the help of a dictionary." 1.6% even admit they can "understand only a few words when they read" and 1% say they cannot read at all (see Table 5.10).

Although responses seem to confirm our working hypothesis that, given the status of and training in reading English, students should rate their proficiency as well above average, the proportion of students claiming to have near native competence in reading is not all that impressive. It is even lower than the proportion claiming the same competence in listening. If, after two years of intensive training in listening and reading, just

over one in ten achieves native proficiency and over one in five hardly manages to understand half of what he/she reads even with the help of a dictionary, CBSLI either fails to help a significant minority overcome subject-matter difficulties or is not contributing much to their language proficiency, or both.

TABLE 5.10

PROFICIENCY IN ENGLISH (READING)

	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	0	0.0	2	4.4	0	0.0	0	0.0	2	1.0
2	1	2.7	0	0.0	1	1.4	1	2.9	3	1.6
3	7	18.9	15	33.3	9	12.8	11	32.3	42	22.5
4	23	62.1	26	57.7	45	64.2	18	52.9	112	60.2
5	6	16.2	2	4.4	15	21.4	4	11.7	27	14.5

1= not at all
2= I can understand only a few words when I read
3= I can understand about half of what I read (with a dictionary)
4= I can understand most of what I read (with a dictionary)
5= I understand everything I read

A similar pattern of responses appeared when students were asked how successful they thought they were in remembering what they read in English. 45% assessed their performance as "average". A further 25% rated it "above average" and 4% reckoned they could remember what they read in an "excellent" way. Around 25% admitted to having a "below average" and "poor" ability in this skill. Table 5.11 presents the answers.

These responses indicate that a relative majority of students feel they have an "average" level of reading retention, far from approximating native-speaker norms. Again 1 in 5 students rate it as "poor" or "below average", despite the emphasis put on improving reading skills in the preparatory year and despite another two years of experience with

CBSLI. The effectiveness both of these training courses and of CBSLI is far from out-standing and a re-appraisal of their methodology may be called for.

TABLE 5.11 REMEMBERING WHAT THEY READ									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	3	8.1	2	4.4	2	2.8	1	2.9	8	4.3
2	3	8.1	15	33.3	16	22.8	4	11.7	38	20.4
3	16	43.2	19	42.2	32	45.7	18	52.9	85	45.6
4	13	35.1	7	15.5	18	25.7	9	26.4	47	25.2
5	2	5.4	2	4.4	2	2.8	2	5.8	8	4.3

1= poor 2= below average 3= average 4= above average 5= excellent

Students were also asked how helpful CBSLI had been in enabling them to read their main subject textbooks. 63% felt it had helped in this respect. Only 13% reported no change at all: 3% of students in Chemical Engineering, 10% of students in Architecture, 15% in Sociology and 17% in Economics.

In this question we wanted to see whether students perceived CBSLI as playing any positive part in helping them read their textbooks. The high percentage of "improved" answers (63%) indicates that CBSLI -not the dictionary as in Table 5.10- is the enabling factor.

TABLE 5.12									
READING TEXTBOOK IN MAIN SUBJECT									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	4	10.8	7	15.5	12	17.1	1	2.9	24	12.9
2	20	54.0	30	66.6	49	70	19	55.8	118	63.4

On the basis of the positive responses given to the previous question one would assume that students would find their reading abilities in other areas improved as well. However, as shown in Table 5.13, around 37% of all students report "no improvement" in this respect. A slightly higher number of students (38%) observe some improvement in their reading ability in other areas. These findings clearly suggest that CBSLI related reading has little transfer value.

These results, in addition to pointing to the shortcoming of CBSLI in reading, give us enough evidence to question the effectiveness of the "Advanced Reading" freshers' course where students are supposedly taught advanced reading strategies and skills applicable to different types of texts. The benefits derived by students from this course fall somewhat short of good returns on investments.

TABLE 5.13									
READING IN OTHER AREAS									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	16	43.2	18	40	24	34.2	10	29.4	68	36.5
2	7	18.9	19	42.2	35	50	10	29.4	71	38.1

5.2.4 Assessment of Writing and Writing-related Academic Skills

It is generally accepted that writing is the most difficult language skill to be acquired in a second language. Even in a first language, many people find it hard to write coherently and purposefully since it involves cognitively demanding skills like proficiency in the language one is using, an adequate knowledge of the topic to be discussed and how to put these two together.

Be as it may, writing has an important place in the curriculum and a substantial part of the educational process is concerned with the development of writing skills. At METU, apart from instruction in reading skills during the preparatory year, all Freshers take "Academic Report Writing", a course designed to help students with library research and the production of such writing forms as essays, reports and term papers.

Students were asked to rate their writing skills and indirectly the programme which aims to help them become effective writers.

15% of all students (a percentage which matches scores obtained in reading and listening skills) say they can "write at native-like level." 44% reckon they can write "well enough to communicate most ideas with few errors." 33% reckon they can write "well enough to communicate simple ideas, requests, with many errors." Up to 5% admit that they can only write "a few words with difficulty" while another 1.6% say they cannot write at all (see Table 5.14).

Once again the fact that nearly 2 in 5 students can but handle the simplest tasks in writing, is not insignificant. Of course it must be granted that, however good the training, writing, just like speaking, remains one of the most difficult skills to acquire in English. However, if around 40% of students admit that they can only communicate simple ideas, requests with many errors, the efficiency of CBSLI is questionable. Writing requirements in a university entail a much higher level of proficiency than communicating simple ideas

with many errors.

TABLE 5.14									
PROFICIENCY IN ENGLISH (WRITING)									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	1	2.7	1	2.2	1	1.4	0	0.0	3	1.6
2	1	2.7	1	2.2	2	2.8	5	14.7	9	4.8
3	10	27.0	26	57.7	17	24.2	10	29.4	63	33.8
4	18	48.6	15	33.3	37	52.8	13	38.2	83	44.6
5	7	18.9	2	4.4	13	18.5	6	17.6	28	15.0

1= not at all
2= few words with difficulty
3= well enough to communicate simple ideas, requests with many errors
4= well enough to communicate most ideas with few errors
5= I can write at native-like level

Students were asked to rate their ability to "take organized and readable lecture notes". Of all students 30% rated their ability as "average" and 20.9% as "above average". 7% deemed it "excellent" as opposed to 8.6% considering it "poor". Although responses were generally positive, the percentage of students admitting to a "below average" level was 31.7% (see Table 5.15).

The high percentage of "poor" and "below average" answers (40.5%) is consistent with students' own assessment of their writing skills. The most interesting figure in Table 5.15, however, is that more than 20% of Chemical Engineering students rate themselves "excellent", a much higher score than with respect to other academic skills. We reckon this has got to do with the simpler syntax of scientific language, the ratio of equations, graphics etc. to text, and also the amount of written information supplied by the lecturer on the blackboard and there to be copied down.

TABLE 5.15 TAKING ORGANIZED AND READABLE LECTURE NOTES									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	3	8.1	6	13.3	6	8.5	1	2.9	16	8.6
2	10	27.0	18	40	22	31.4	9	26.4	59	31.7
3	14	37.8	15	33.3	17	24.2	11	32.3	57	30.6
4	8	21.6	5	11.1	20	28.5	6	17.6	39	20.9
5	2	5.4	1	2.2	4	5.7	7	20.5	14	7.5

1= poor 2= below average 3= average 4= above average 5= excellent

From taking lecture notes we move to a more demanding academic skill, knowing how to organize ideas in an exam essay.

As Table 5.16 below shows, 38% of students rate themselves "average" while 20% claim to be of "above average" level. Only 3% judge their ability "excellent". The percentage of "below average" answers is about 27%, comparatively higher than that for "above average" answers. 9% think their ability to organize their ideas in an exam essay is "poor". The answers to this question offered no statistically significant difference between departments.

As expected, answers to this question corroborate previous findings related to students' assessment of their writing skills. Although at first glance, the percentages appear to be preponderantly positive, a 37% of "poor" and "below average" should not be dismissed lightly. It should rather be taken as an indication of students' persistent difficulty to cope with writing requirements.

TABLE 5.16 KNOWING HOW TO ORGANIZE MY IDEAS IN AN EXAM ESSAY									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	5	13.5	9	20	1	1.4	3	8.8	18	9.6
2	6	16.2	14	31.1	19	27.1	12	35.2	51	27.4
3	18	48.6	16	35.5	29	41.4	9	26.4	72	38.7
4	8	21.6	4	8.8	19	27.1	8	23.5	39	20.9
5	0	0.0	2	4.4	2	2.8	2	5.8	6	3.2

1= poor 2= below average 3= average 4= above average 5= excellent

Another question asked students how helpful CBSLI had been with enabling them to take lecture notes.

A majority of students (57%) feel that thanks to CBSLI they are more able to take lecture notes than they were before. Around 19% , which is comparatively high, report no positive contribution from CBSLI to their skill. Here again, students in the Departments of Economics and Chemical Engineering report a comparatively higher degree of "no improvement" (30% and 20.5%). It is interesting that exactly the same percentage of Chemical Engineering students (20.5%) rate themselves as "excellent" in terms of taking lecture notes (see Table 5.15), which indicates that their high assessment in writing derives from the nature of scientific language and not from CBSLI itself.

TABLE 5.17									
TAKING LECTURE NOTES									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F	%
1	3	8.1	4	8.8	21	30	7	20.5	35	18.8
2	21	56.7	33	73.3	40	57.1	13	38.2	107	57.5

Students were asked if they believed their ability to write papers in their main subject improved because of CBSLI. 52% of students observed some improvement whereas 22% reported "no improvement". Although 52% is a high percentage, it is far from overwhelming.

TABLE 5.18									
WRITING PAPERS IN MAIN SUBJECT									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F	%
1	6	16.2	12	26.6	18	25.7	5	14.7	41	22.0
2	17	45.9	25	25.5	41	58.5	15	44.1	98	52.6

Do students observe any improvement in their ability to write in other areas?

Responses to this question reveal that as with reading, students find their writing abilities limited to their own field since up to 47% of all students see "no improvement" in writing in other areas against 26% who observe some improvement. Quite clearly, students' writing and reading skills are non-transferable and of a narrowly functional character.

TABLE 5.19 WRITING IN OTHER AREAS									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F	%
1	16	43.2	24	53.3	35	50	12	35.2	87	46.7
2	6	16.2	13	28.8	24	34.2	7	20.5	50	26.8

One last question asked students if they had noticed any improvement in their ability to use English in general since taking their content classes in that language.

An overwhelming percentage (75%) say "yes", 11% report "no improvement" and around 13% are "not sure". Table 5.20 gives the distribution of answers.

TABLE 5.20 IMPROVEMENT IN ENGLISH									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F	%
1	24	64.8	36	80	61	87.1	20	58.8	141	75.8
2	5	13.5	2	4.4	6	8.5	8	23.5	21	11.2
3	8	21.6	7	15.5	3	4.2	6	17.6	24	12.9

1= yes   2= no   3= not sure

In the above section, we have presented the results of students' self-rating in four basic study skills. The picture which emerges from the overall data is, at best, a rather mixed one.

There is evidence that students have made limited progress in their command of English. Relatively large minorities report having difficulties with speaking and writing and even with reading and listening despite being immersed in English language. And

despite all the training in academic skills, sizable minorities fail to manage academic tasks in English. And when it comes to transfering those skills to non subject-specific tasks, then it is a majority of students who admit to no improvement.

At this point it might be useful to consider the teachers' views on the subject. In an open question, teachers were asked whether they believed that English-medium education contributed positively to students' level of proficiency in that language. A vast majority of teachers gave a positive answer to this question but added the following comments:

[1] Teaching content courses in English does help students to develop their English skills. But, as far as students' comprehension of content is concerned, it has a negative effect.

[2] It is difficult to say "no", but I do not think that it has any positive contribution either.

[3] Probably it is positive. The biggest disadvantage with English-medium education is that any contribution to Turkish as a language of science is out of question.

[4] I certainly believe that students develop their English in this way, particularly in terms of receptive vocabulary. However, I can not say the same thing for their use of English because they have very few opportunities to produce the language. Exams are designed as multiple-choice, hence lessening their chances of producing the target language even more.

[5] One expects improvement in their English. I am not in the position to determine the degree of this improvement. I do not believe it is that high since I observe no difference between second and fourth year students' level of English.

These comments suggest that teachers are also concerned about the limited opportunities students have to develop their communicative competence. This is why they believe that while CBSLI might help students develop their receptive skills in English it

fails to improve their productive skills.

Despite CBSLI's shortcomings in METU's context, one would have still expected greater improvement in students' language performance. The possible explanations we will consider here are mostly related to the classroom environment and teachers' behaviour in the classroom again from the students' point of view.

The first explanation has to do with the extent of the teachers' concern for and ability to deal with students' language problems. We know that METU style CBSLI differs from its North American counterpart in a number of ways and notably in the absence of language back up courses supplementing content learning and providing learners with a supportive environment where they feel that their language problems can be dealt with. At METU, content professors have to assume the dual role of content and language teachers at one and the same time. But, is it not too much to ask of content teachers? Are they not too busy concentrating on content and acting as native-like models in English, to attend to students' language problems? And even if they could, would they be able to help as effectively as trained language teachers would? What we know for certain is that students do need linguistic guidance. The extent to which content teachers are actually able to deliver this help may be gauged from students' responses.

A clear majority of students (64%) regard teachers' concern for students' problems as "poor". Only 19% rate it as "good", 11% as "very good" and 3% as "excellent". As Table 5.21 shows, not a single student from the Departments of Chemical Engineering and Architecture finds teachers "excellent" in this respect. Given the fact that content teachers are the only persons students can turn to when they have language problems, the situation students are in seems very bleak indeed.

TABLE 5.21 TEACHERS' CONCERN FOR STUDENTS' LANGUAGE PROBLEMS									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	10	27.0	17	37.7	19	27.1	14	41.1	60	32.2
2	11	29.7	13	28.8	22	31.4	14	41.1	60	32.2
3	9	24.3	7	15.5	17	24.2	4	11.7	37	19.8
4	7	18.9	6	13.3	7	10	2	5.8	22	11.8
5	0	0.0	2	4.4	5	7.1	0	0.0	7	3.7

"Not all content teaching is necessarily good language teaching" says Swain (1988:68). Teachers should be able to manipulate content teaching to boost its language teaching potential by making necessary adjustments in the presentation of content. "It is important to establish certain conditions in the organization and delivery of the subject matter to ensure successful language acquisition as well as content mastery. These include an emphasis on making the content comprehensible through a variety of both planned and spontaneous adjustments" (Brinton et al. 1989:50). Among these adjustments are a slow-paced lecture delivery, choice of words, comprehension checks, rephrasing etc.

In order to find out to what extent these strategies are used in class, we asked students to rate their teachers' methodology.

51% of the students rate the teaching methods used in class as "good" as opposed to about 40% who regard them as "poor". A small proportion (7%) rate them as "very good" and 2% as "excellent".

For two students in five then the language potential of content teaching is not used as efficiently as proponents of CBSLI assume it is. Which confirms Swain's statement.

Sadly, content teachers are not adequately prepared for teaching content in a foreign language. For content teaching to promote proficiency in that language, a lot of organization, preparation and teacher training would be required.

	Architecture F %	Sociology F %	Economics F %	Che. Eng. F %	Total F %
TABLE 5.22					
STUDENTS' EVALUATION OF TEACHING METHODS USED IN THE CLASS					
1	4 10.8	11 24.4	7 10	5 14.7	27 14.5
2	7 18.9	13 28.8	16 22.8	10 29.4	46 24.7
3	21 56.7	20 44.4	40 57.1	14 41.1	95 51.0
4	2 5.4	1 2.2	6 8.5	5 14.7	14 7.5
5	3 8.1	0 0.0	1 1.4	0 0.0	4 2.1

We also wanted know how teachers evaluate their own methodology in content classes. The results are consistent with students' assessment since a majority of teachers (68%) report that they do not use any specific methods or strategies with students with limited language proficiency. 31% of teachers report using the following strategies:

- letting students express themselves in Turkish

- devoting the last ten minutes of the class to giving summaries in Turkish

- giving the definition of the terms in Turkish

- simplifying the language they use in the class

- encouraging students to ask questions

Given the limited English proficiency of Turkish students one might view the use of Turkish in the class as unavoidable. However, it is not consistent with immersion methodology which advocates constant use of target language in the classroom so that students are exposed to the full range of second language use. Both teachers and students at

METU say that CBSLI fails to maintain this full exposure to English.

TABLE 5.23									
SPECIFIC STRATEGIES USED WITH STUDENTS WITH LLP									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	3	30	1	9.0	4	44.4	5	45.4	13	31.7
2	7	70	10	90.9	5	55.5	6	54.5	28	68.2

1= yes   2= no

The amount of exposure to English also has a bearing on the general quality of the language environment.

One of the main advantages of CBSLI is that students are exposed to a rich second language environment, in which the target language is used as a means of instruction and of classroom management. Hence a greater use of the target language. However, the ratio of first to second language use in the classroom largely depends upon a number of factors such as student preferences, the nature of the subject matter etc.

Students at METU rated the extent of second language use in the classroom in the following way:

More than 18% considered the proportion of time involved in English as "poor" while 27% rated it as "fair". 30% found it "good" while around 18% reckoned the time devoted to English was "very good". And 6% rated it as "excellent".

These responses are significant since they indicate that a high percentage of students do not believe that the amount of time spent on English is sufficient.

	Architecture F %	Sociology F %	Economics F %	Che. Eng. F %	Total F %
1	5 13.5	11 24.4	8 11.4	10 29.4	34 18.2
2	9 24.3	7 15.5	21 30	14 41.7	51 27.4
3	15 40.5	16 35.5	20 28.5	6 17.6	57 30.6
4	7 18.9	9 20	15 21.4	2 5.8	33 17.7
5	1 2.7	2 4.4	6 8.5	2 5.8	11 5.9

TABLE 5.24

THE GENERAL PROPORTION OF TIME INVOLVED IN ENGLISH

As regards teachers' own evaluation in this respect, only one teacher from the Department of Economics acknowledges that the actual class time spent using English is 0-19%, as against a vast majority of teachers (83%) claiming that 80-100 of their class time is spent using English. However, teachers also note several difficulties in maintaining English in the class. They agree upon the fact that the most important reason why they can not use English all the time is the presence of many students with limited English proficiency. Therefore, they feel the need to resort to Turkish occasionally in order to make sure that students do comprehend the content. Teachers' answers are listed in Table 5.25 below.

TABLE 5.25 PERCENTAGE OF CLASS TIME USING ENGLISH									
Architecture		Sociology		Economics		Che. Eng.		Total	
F	%	F	%	F	%	F	%	F	%
1	0	0.0	1	11.1	0	0.0	0	0.0	1	2.4
2	0	0.0	0	0.0	0	0.0	1	10	1	2.4
3	0	0.0	0	0.0	0	0.0	1	10	1	2.4
4	2	18.1	0	0.0	1	9.0	1	10	4	9.7
5	9	81.8	8	88.8	10	90.9	7	70	34	82.9

1= 0 - 19%
2= 20 - 39%
3= 40 - 59%
4= 60 - 79%
5= 80 - 100%

5.3 ACADEMIC PERFORMANCE

In this section, we will deal with the question of whether students' academic performance suffers as a result of being taught the subject matter in a second language.

Proponents of CBSLI have long argued that the primary purpose of CBSLI programmes is not language but academic development. As Genesee put it, "the success of the programmes has been determined in large part by the fact that the participating students attain high levels of functional proficiency in a second language at no cost to their academic development" (1987:17).

In North America this principle is put into practice by integrating study skills and content. Students are encouraged and instructed to develop their cognitive strategies which in turn facilitate and ensure subject-matter learning.

At METU, however, students are provided with limited and selective training in

such study skills. For example while some training in listening and reading-related study skills is provided, those which require production, like speaking, have been left out of the curriculum of the preparatory year. This discrepancy between METU style CBSLI and its North American counterparts is bound to have some impact on Turkish students' academic performance.

Another important aspect of North American programmes which leads to academic development is the close collaboration between language teachers and content teachers. They work together as a team complementing each other "so that a language teacher who notices gross gaps in a student's content area knowledge would refer that student to the content course instructor or tutor, and vice versa" (Brinton et al. 1987:65).

We asked teachers at METU whether there was good co-operation among teachers of content and teachers of language.

34% of teachers dismiss the statement as "definitely false", another 12% believe that it is "probably false" while 36% are uncertain. Only 2% (two teachers out of 41) reply that the statement is "definitely true" and 14% reckon it is "probably true".

These responses suggest that there is no genuine co-operation between teachers of content and teachers of language at METU. This fact is in stark contrast with the situation in North America which is held as a model in Turkey. Despite the importance attached to close collaboration between content and language departments in North America, the METU version of immersion fails to harness the same kind of co-operation between departments. This fact points to a major shortcoming in METU style CBSLI which is likely to have detrimental effects on students' academic development as well as on second language learning.

TABLE 5.26 COOPERATION AMONG TEACHERS OF CONTENT AND LANGUAGE TEACHERS									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	4	40	5	45.4	4	44.4	1	9.0	14	34.1
2	1	10	0	0	2	22.2	2	18.1	5	12.1
3	5	50	4	36.3	2	22.2	4	36.3	15	36.5
4	0	0.0	2	18.1	1	11.1	1	9.0	6	14.6
5	0	0.0	0	0.0	0	0.0	1	9.0	1	2.4

Here, the main question is whether or to what extent Turkish students' academic performance is affected by learning through a second language in which they lack functional proficiency to carry out academic tasks. Is it the case that because Turkish students have limited exposure to English both prior and during receiving instruction in academic subjects, they do not benefit fully from academic instruction?

First we wanted to find out to what extent the language of instruction had influenced students' interest in the subject matter since interest is often regarded as a major factor in academic performance.

It appears that 20% of all students find it "extremely helpful", 21% "very helpful". About as many reply "helpful" as reply "slightly helpful" (25% and 25%); but 6% say it is "no help at all" (see Table 5.27).

More than 31% think that CBSLI plays no or little part in increasing their interest in the subject matter. Common sense suggests that if despite the handicap of limited proficiency in the language of instruction, students' motivation to learn the subject matter does not decline, it must be fuelled from other sources (career prospects for instance, as

may well be the case with 29% of Chemical Engineering students).

TABLE 5.27									
INTEREST IN THE SUBJECT MATTER									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	2	5.4	2	4.4	5	7.1	3	8.8	12	6.4
2	9	24.3	14	31.1	17	24.2	7	20.5	47	25.2
3	12	32.4	12	26.6	15	21.4	9	26.4	48	25.8
4	9	24.3	8	17.7	18	25.7	5	14.7	40	21.5
5	5	13.5	9	20	15	21.4	10	29.4	39	20.9

1= not helpful at all
2= slightly helpful
3= helpful
4= very helpful
5= extremely helpful

Students were also asked how helpful CBSLI had been in improving their understanding of concepts and principles in their field. 9% of students report finding it "not helpful at all". 18% believe it has been "slightly helpful". 25% find it "helpful" while another 25% believe it has been "very helpful". And finally, around 21% regard it as "extremely helpful" (see Table 5.28).

More than 17% of Chemical Engineering students reckon CBSLI has been "extremely helpful" in this respect. One reason for this high score -when compared with their language assessment- is that formulaic expressions inherent in the language of chemistry, because they are more or less the same in every language, help them understand concepts specific to their field. We may also add the fact that demonstrations in the laboratories and countless rephrasing on the blackboard by the teacher enable science students to catch up with what they have missed before.

	Architecture F %	Sociology F %	Economics F %	Che. Eng. F %	Total F %
TABLE 5.28 IMPROVEMENT IN UNDERSTANDING OF CONCEPTS AND PRINCIPLES IN THE FIELD					
1	5 13.5	3 6.6	6 8.5	3 8.8	17 9.1
2	10 27.0	7 15.5	10 14.2	8 23.5	35 18.8
3	8 21.6	13 28.8	17 24.2	9 26.4	47 25.2
4	8 21.6	12 26.6	20 28.5	8 23.5	48 25.8
5	6 16.1	10 22.2	17 24.2	6 17.6	39 20.9

1= not helpful
2= slightly helpful
3= helpful
4= very helpful
5= extremely helpful

The answers to the two previous questions suggest that a majority of students do not think that their academic performance/interest suffers considerably from the fact that they are not highly proficient in the language of instruction. Could it be that teachers' caretaking skills succeed in smoothing out the problems? How do their preparation and organization or their knowledge of course materials and content relate to students' somewhat positive assessment of their academic achievement?

The content-based instruction approach requires subject matter instructors to be experts in their fields. How do Turkish students evaluate their teachers' knowledge of course material and content?

Up to 40% of all students rate their teachers as "good", 37% as "very good" and 14% rate them as "excellent". Only 8% find teachers' knowledge of course material and content "fair" and only one student from the Department of Chemical Engineering rates it

"poor". These results indicate that students seem to feel quite satisfied with their teachers' knowledge of course material and content.

TABLE 5.29 TEACHERS' KNOWLEDGE OF COURSE MATERIAL AND CONTENT									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	0	0.0	0	0.0	0	0.0	1	2.9	1	.5
2	5	13.5	6	13.3	4	5.7	1	2.9	16	8.6
3	18	48.6	20	44.4	20	28.5	16	47.0	74	39.7
4	12	32.4	13	28.8	31	44.2	12	35.2	68	36.5
5	2	5.4	6	13.3	15	21.4	4	11.7	27	14.5

1= poor   2= fair   3= good   4= very good   5= excellent

Students' responses are generally positive on the question of teachers' preparation and organization as well. 53% of all students rate it as "good", 25% as "very good", and 5% as "excellent". The percentage of students who report dissatisfaction with the teachers' preparation and organization is around 15%.

A low 5% "excellent" score may indicate that students wish the presentation of subject matter were much more helpful for them to master the content.

	Architecture		Sociology		Economics		Che. Eng.		Total	
TABLE 5.30										
TEACHERS' PREPARATION AND ORGANIZATION										
	F	%	F	%	F	%	F	%	F	%
1	1	2.7	2	4.4	4	5.7	2	5.8	9	4.8
2	1	2.7	7	15.5	9	12.8	3	8.8	20	10.7
3	22	59.4	29	64.4	27	38.5	22	64.7	100	53.7
4	10	27.0	6	13.3	25	35.7	6	17.6	47	25.2
5	3	8.1	1	2.2	5	7.1	1	2.9	10	5.3

1= poor   2= fair   3= good   4= very good   5= excellent

In response to a question asking them how they rate their teachers' ability to explain in English, as many students answer "poor" as answer "excellent" (4.3% v. 4.3%); but 22% rate it "very good" as opposed to 18.8% judging it only "fair". And finally 50% seem to be reasonably satisfied with what they regard as a "good" ability to explain in English.

These high scores for teachers' ability to lecture in English reflect the teachers' own confidence in this respect.

	Architecture		Sociology		Economics		Che. Eng.		Total	
TABLE 5.31 **STUDENTS' ASSESSMENT OF TEACHERS' ABILITY** **TO EXPLAIN IN ENGLISH**										
	F	%	F	%	F	%	F	%	F	%
1	1	2.7	1	2.2	2	2.8	4	11.7	8	4.3
2	7	18.9	7	15.5	15	21.4	6	17.6	35	18.8
3	17	45.9	28	62.2	31	44.2	17	50	93	50
4	9	24.3	8	17.7	19	27.1	6	17.6	42	22.5
5	3	8.1	1	2.2	3	4.2	1	2.9	8	4.3

As Table 5.32 shows, around 59% of the teachers regard themselves as fluent and confident and only occasionally making minor errors, while 34% claim to have a "native-like fluency". These results indicate that teachers feel a high level of self-confidence with respect to their proficiency in English, which does not come as a surprise since a vast majority of them hold degrees from the U.S or Great Britain.

What is surprising though is that a majority of teachers we have been able to interview seem to think that their good command of English makes them qualified to be content and language teachers at the same time. Yet, being good at the language of instruction is not sufficient to make one a good languager teacher. One should also be able to make the content comprehensible to students with limited language proficiency by means of specific strategies, like rephrasing, rewording etc. all of which strategies none of the Turkish teachers actually use. For want of special training, content teachers would not be able to help as effectively as trained language teachers would, even when aware of their students' language problems.

TABLE 5.32 TEACHERS' SELF-ASSESSMENT (PROFICIENCY IN ENGLISH)									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	2	20	0	0.0	0	0.0	0	0.0	0	0.0
4	5	50	7	63.6	5	55.5	7	63.6	24	58.5
5	3	30	3	27.2	4	44.4	4	36.3	14	34.1

1= other
2= confident with junior classes, but not at post 'O' grade
3= a bit rusty, but with a bit of practice could be fluent again
4= fluent and confident but occasionally make minor errors
5= native speaker fluency

5.4 ATTITUDINAL CONSIDERATIONS

It is generally accepted that positive attitudes towards the target language and the language learning situation itself, bolster motivation, which in turn fosters achievement both in second language learning and in content mastery.

There has been a considerable amount of research -particularly in Canada - on the relationship between language learning and attitudinal factors. The most noteworthy of all is a study by Gardner and Lambert (1972) which demonstrates how crucial it is for second language learners to have positive and favourable attitudes toward the target language and the target language group (e.g. French in the Canadian setting).

We believe that in analysing the Turkish context in terms of attitudes to learning English, it is necessary to take socioeconomic and political factors into account. Given the social status of English and its increasing importance as an international language, Turkish students realize the necessity and long term usefulness of the language. This

perception leads to an increased value being attached to the learning of English.

Turkish students, therefore, come to language learning with positive attitudes and these attitudes in turn influence their motivation to learn the second language. This pressure to learn English is also bound to influence students' answers to the questionnaire in a positive way.

Students were asked how important English was for their future career. More than 53% said it was "very important" while 36% rated it as "moderately important". Around 7% reckoned it was "slightly important" and only 2% said it was "not important at all".

These responses do confirm the validity of both points made above.

TABLE 5.33 IMPORTANCE OF ENGLISH FOR STUDENTS' FUTURE CAREER									
	Architecture		Sociology		Economics		Che. Eng.		Total
	F	%	F	%	F	%	F	%	F	%
1	3	8.1	1	2.2	0	0.0	0	0.0	4	2.1
2	6	16.2	4	8.8	2	2.8	1	2.9	13	6.9
3	17	45.9	14	31.1	23	32.8	14	41.1	68	36.5
4	10	27.0	26	57.7	45	64.2	19	55.8	100	53.7

1= not at all important
2= slightly important
3= moderately important
4= very important

We also asked teachers whether they thought students should learn English.

70% of them believe that a good knowledge of English is essential for students. Around 20% regard the statement as "probably true". 5% are "uncertain". None of the teachers think that the statement might be "probably false" or "definitely false". These responses demonstrate that an overhelming majority of the teachers believe in the

usefulness of English for students.

TABLE 5.34
ALL STUDENTS IN THIS SCHOOL SYSTEM
SHOULD LEARN ENGLISH

	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
3	1	10	0	0.0	0	0.0	1	9.0	2	4.8
4	1	10	1	9.0	4	44.4	2	18.1	8	19.5
5	7	70	10	90.9	5	55.5	7	63.6	29	70.7

1= definitely false
2= probably false
3= uncertain
4= probably true
5= definitely true

Having established the degree of importance of English for students, we asked how they felt about English being used as a medium of instruction. They were given a scale of 1 to 5 (from "very much in favour" to "very much opposed").

Around 25% of all students were either "opposed" or "very much opposed" against 55% in favour of English-medium education with 20% being neutral. These responses -contrary to our expectations- indicate that despite the high value attached to English, a significant minority -one in five- do not favour the English- medium education.

An examination of answers in Table 5.35 shows that the highest level of approval for English-medium education comes from the Departments of Economics and Chemical Engineering. Given the fact that a vast majority of the very same students consider English as very important for their future careers (see Table 5.33), this support for CBSLI

is understandable. Obviously, economic pressures and the difficulty of finding a job (for which English is usually a prerequisite) in a competitive market affects students' attitudes towards learning through a second language.

On the other hand, only 8% of Architecture students are in favour of English-medium instruction. The reason might be the low level of importance they have assigned to English for their future career and of course their dissatisfaction with learning through English.

TABLE 5.35					
STUDENTS' ATTITUDES TO ENGLISH-MEDIUM EDUCATION					
	Architecture || Sociology || Economics || Che. Eng. || Total	
	F	%	F	%	F	%	F	%	F	%
1	2	5.4	5	11.1	3	4.2	7	20.5	17	9.1
2	6	16.7	9	20	10	14.2	4	11.7	29	15.5
3	9	24.3	9	20	15	21.4	4	11.7	37	19.8
4	17	45.9	9	20	19	27.1	7	20.5	52	27.9
5	3	8.1	13	28.8	23	32.8	12	35.2	51	27.4

1= very much opposed
2= opposed
3= neutral
4= in favour
5= very much in favour

The next question in this section was "do you think that it would be more beneficial if lessons were wholly conducted in Turkish, and supplemented by an intensive English course?". Table 5.36 shows the answers.

Probably the most striking information emerging from the questionnaire is that up to 48% of all students favoured this view. These responses again indicate students' dissatisfaction with English-medium education and their preference for Turkish-medium

education. The highest level of support comes from students in the Department of Architecture (59%) followed by students in the Sociology Department (53%), students in Economics (44%), and students in Chemical Engineering (38%).

On the other hand, around 51% of all students rejected this view. Reversing the order above, 58% of students in the Department of Chemical Engineering, 56% in the Department of Economics, 46% of Sociology students and 38% (lowest of all) of Architecture students.

We believe that the way students perceive the role of English in their future careers shapes their attitudes considerably. It is highly likely that since Economics and Chemical Engineering students regard English as very important and probably see CBSLI as the only way of mastering it, they prefer English-medium instruction despite the fact they indicated their dissatisfaction with learning through English and also with their level of command of English.

TABLE 5.36 ATTITUDE TO INSTRUCTION IN TURKISH SUPPLEMENTED BY INTENSIVE ENGLISH				
	Architecture F %	Sociology F %	Economics F %	Che. Eng. F %	Total F %
Yes	22 59.4	24 53.3	31 44.2	13 38.2	90 48.3
No	14 37.8	21 46.6	39 55.7	20 58.8	94 50.5

Students were also asked whether they felt their self-confidence had increased thanks to CBSLI.

As shown in Table 5.37, nearly 43% of all students feel that CBSLI has been either extremely or very helpful in promoting self-confidence. An additional 28% say it has

been "helpful", while 13% regard it as "slightly helpful" and another 13.9% as "not helpful at all".

More than 27% of students acknowledge that CBSLI has had no positive contribution to their self-confidence despite the fact that CBSLI proponents persistently claim that CBSLI helps reduce learners' inhibitions in using the target language and develop a positive self-image. For a significant number of students at METU, however, CBSLI fails to achieve this.

TABLE 5.37 INCREASE IN SELF-CONFIDENCE									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	5	13.5	8	17.7	5	7.1	7	20.5	25	13.4
2	7	18.9	5	11.1	7	10	7	20.5	26	13.9
3	11	29.7	14	31.1	21	30	7	20.5	53	28.4
4	10	27.0	11	24.4	18	25.7	4	11.7	43	23.1
5	4	10.8	6	13.3	18	25.7	9	26.4	37	19.8

1= not helpful at all
2= slightly helpful
3= helpful
4= very helpful
5= extremely helpful

We asked teachers whether they believed the self-confidence of students was detrimentally affected by their having to learn through a second language.

More than 50% of teachers are of the opinion that the self-confidence of students is negatively affected by using English as the medium of education. A further 5% believe that the statement is "definitely true". 12% are "uncertain" while around 30% claim it is "false".

These responses indicate that teachers, just like students themselves, are worried about the lack of students' self-confidence.

TABLE 5.38 STUDENTS' SELF-CONFIDENCE IS DETRIMENTALLY AFFECTED									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	0	0.0	2	18.1	2	22.2	1	9.0	5	12.1
2	2	20	1	9.0	2	22.2	3	27.2	8	19.5
3	2	20	0	0.0	0	0.0	3	27.2	5	12.1
4	6	60	6	54.5	5	55.5	4	36.3	21	51.2
5	0	0.0	2	18.1	0	0.0	0	0.0	2	4.8

1= definitely false
2= probably false
3= uncertain
4= probably true
5= definitely true

The next section refers to students' motives for choosing a faculty with an English-medium.

The questionnaire offered five possible reasons why someone would prefer to study in a faculty using a foreign language medium. Students were asked to rank them in order from most to least important. The most important reason cited by the vast majority was the belief that they would have a much better chance of obtaining a good job (49% of all students). This was followed by the reason that they would have a much better chance of studying abroad or obtaining a job abroad (24%). It thus appears that students are mostly motivated by instrumental reasons. For 14%, the reason was "to have a better access to world literature" and for 5% it was "to keep themselves better informed about developments outside Turkey". Another 5% preferred the reason "to become more sensitive to

the values and traditions of people from various parts of the world".

These data strongly suggest that Turkish students consider English as a vehicle for educational and occupational mobility. What motivates them is the practical advantage of learning a language rather than an integrative motive "reflecting a sincere and personal interest in the people and culture" (Gardner and Lambert 1972:132).

However, it does not mean that instrumentally motivated students will be less successful than integratively motivated ones. Although Gardner argued that an integrative motivation was needed for successful language learning, there are studies (Oller et al. 1977; Lukmani 1972) which show that in some contexts, a less integratively motivated second language learner could turn out to be a better learner. Besides, in the Turkish context where contacts with native speakers are very limited, finding integratively motivated students would be highly unlikely.

TABLE 5.39 REASONS FOR CHOOSING A FACULTY IN ENGLISH									
	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	21	56.7	18	40	39	55.7	14	41.7	92	49.4
2	9	24.3	9	20	16	22.8	12	35.2	46	24.7
3	2	5.4	2	4.4	5	7.1	1	2.9	10	5.3
4	2	5.4	6	13.3	2	2.8	0	0.0	10	5.3
5	2	5.4	10	22.2	8	11.4	7	20.5	27	14.5

1= to have a much better chance of obtaining a good job
2= to have a much better chance of studying abroad or obtaining a job
    abroad
3= to keep myself better informed about developments outside Turkey
4= to become more sensitive to the values and traditions of people from
    various parts of the world
5= to have better access to world literature

Responses to the next question as to whether students observed any increase in their interest in learning a foreign language as a result of being instructed in a foreign language are shown in Table 5.40.

Around 30% of students reckon CBSLI is "extremely helpful" in this respect. Up to 45% find it either "very helpful" or "helpful". 12% consider CBSLI as only "slightly helpful" while around 13% claim that it is "not helpful at all."

This high level of interest in English (75%) most probably stems from the fact that a vast majority of Turkish students regard English as something essential for their future careers.

	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	5	13.5	8	17.7	8	11.4	3	8.8	24	12.9
2	3	8.1	4	8.8	9	12.8	7	20.5	23	12.3
3	7	18.9	15	33.3	14	20	5	14.7	41	22.0
4	14	37.8	8	17.7	13	18.5	8	23.5	43	23.1
5	8	21.6	9	20	26	37.1	11	32.3	54	29.0

TABLE 5.40

INTEREST IN LEARNING A FOREIGN LANGUAGE

To the question as to how satisfied they are with their success in learning through the medium of English, only 12% of students say they are "extremely satisfied" 25% claim to be "very satisfied" and another 22% "satisfied". However, a good 30.6% say they are "very little satisfied" and a further 9% report having "no satisfaction" at all -altogether quite a sizable minority!

A look at the distribution of answers between departments shows that the least satisfied groups belong to the Departments of Sociology and Architecture. More Sociology students acknowledge that they are "not satisfied" as compared with Economics and Chemical Engineering students, and fewer Sociology students express "extreme satisfaction" with learning through English. A possible interpretation for this high level of dissatisfaction might be that Sociology, being a more discursive subject, invites more sophisticated discussion than their command of English allows. Hence their frustration and dissatisfaction with CBSLI.

	Architecture		Sociology		Economics		Che. Eng.		Total	
	F	%	F	%	F	%	F	%	F	%
1	4	10.8	6	13.3	6	8.5	1	2.9	17	9.1
2	12	32.4	19	42.2	14	20	12	35.2	57	30.6
3	9	24.3	11	24.4	14	20	8	23.5	42	22.5
4	9	24.3	7	15.5	22	31.4	9	26.4	47	25.2
5	5	8.1	2	4.4	14	20	4	11.7	23	12.3

TABLE 5.41

STUDENTS' LEVEL OF SATISFACTION WITH CBSLI

1= not satisfied at all
2= very little satisfied
3= satisfied
4= very satisfied
5= extremely satisfied

Are teachers satisfied with CBSLI? Do they think that CBSLI has decreased the satisfaction they get from teaching?

48% of teachers state that having to teach through English does not decrease the satisfaction they get from teaching. As many say it is "probably false" as are "uncertain" (12% and 12%); but about 22% acknowledge that CBSLI has a negative effect on their

satisfaction with teaching and a further 5% reply that it is "definitely true". These results show that although a sizable majority of teachers believe English-medium education is necessary and useful, 27% -which is high enough not to be dismissed out of hand- of teachers are not happy about teaching in English.

	Architecture F	Architecture %	Sociology F	Sociology %	Economics F	Economics %	Che. Eng. F	Che. Eng. %	Total F	Total %
TABLE 5.42 CBSLI DECREASES THE SATISFACTION I RECEIVE FROM TEACHING										
1	4	40	4	36.3	5	55.5	7	63.6	20	48.7
2	1	10	3	27.2	0	0.0	1	9.0	5	12.1
3	2	20	0	0.0	3	33.3	0	0.0	5	12.1
4	2	20	3	27.2	1	11.1	3	27.2	9	21.9
5	1	10	1	9.0	0	0.0	0	0.0	2	4.8

Overall rating by students:

Only 3% rate CBSLI as "excellent". As Table 50 below shows, not a single student from the Department of Architecture and the Department of Sociology expresses total satisfaction with CBSLI -in line with their previous ratings. About 19% are of the opinion that CBSLI in general is "very good". And up to 45% think it "good". The percentage of students who give a negative rating to CBSLI is around 31% which is high enough not to be dismissed out of hand. Apparently, despite their high motivation, a high percentage of students are not happy about being instructed in a foreign language and they would prefer a Turkish-medium education supplemented by an intensive English course.

	Architecture	Sociology	Economics	Che. Eng.	Total
TABLE 5.43					
OVERALL RATING					
	F %	F %	F %	F %	F %
1	2 5.4	2 4.4	4 5.7	2 5.8	10 5.3
2	13 35.1	11 24.4	9 12.8	15 44.1	48 25.8
3	13 35.1	24 53.3	35 50	13 38.2	85 45.6
4	9 24.3	8 17.7	17 24.2	2 5.8	36 19.3
5	0 0.0	0 0.0	5 7.1	2 5.8	7 3.7

1= poor
2= fair
3= good
4= very good
5= excellent

In an open question students were asked to identify the problems they had in taking their courses in English. The problems identified by students were as follows:

- limited level of English proficiency

- inadequate vocabulary

- loss of concentration in class

- lack of discussion in class

- inability to participate in any discussion in classroom

- lack of communication with friends studying in a Turkish-medium faculty

- language of textbooks

Students also made the following comments about the problems they encounter in English-medium education:

[1]   It is very difficult for me to understand what I read. What I do is to memorize the information given in the textbook. I just cannot understand the logic behind an

argument.

[2]   In order to grasp the meaning of something, I need to read it many times. I cannot express myself neither in English nor in Turkish.

[3]   I do not think I know any English at all. I cannot understand the content of the lesson.

[4]   I just hate having to look up in a dictionary hundreds of times.

[5]   It is something like kidding ourselves. We pretend that we learn Economics as if we were in England not in Turkey.

[6]   I spend much longer time to learn something in English than I do in Turkish.

[7]   I cannot concentrate for long in the class. This is my problem.

[8]   I do not know anything about Turkish economy or any terminology in Turkish.

[9]   My ability to discuss has vanished. I learn less in a longer period of time. In addition to not being able to participate in any discussions in the class, I have no time for any social activities outside the classroom.

[10]

We do not know Turkish equivalents of the terms we use. What is going to happen when we have jobs? We want lessons in Turkish.

As the quotations above suggest, students' problems are basically related to the language of instruction, English. They again and again point out that they are inadequately prepared to deal with the demands of a foreign language-medium education. They also raise the issue of a lack of Turkish terminology in their fields. They are worried that because they do not know the Turkish equivalents of the terms they use they will have problems when they have jobs. They are also justified in complaining about the lack of time for social activities outside the classroom since we believe they have to work much harder than their counterparts in Turkish-medium universities.

When students were asked what (if anything) had been helpful in lessening these problems, they gave the following answers:

[1] I am not looking for any solution to my problems in English. This is stupid. I chose this university because I thought it was providing the best education in Architecture. That was a mistake. We are not being educated well.

[2] I cannot do much to lessen the problem. All I do is to memorize more by working harder. I know this is no good, plus I do not understand the terms used in Turkish sources.

[3] Preparatory school should be improved. They should create more opportunities to practise in English.

[4] What we do, when the lesson is over, is to discuss with friends everything in Turkish.

[5] Either lessons should be done in Turkish or an economics class in Turkish should be added to the programme.

[6] We should develop our own language of science.

[7] I study Turkish textbooks because I do not understand English ones.

From these answers one can easily sense the frustration students feel. Naturally enough, they consider Turkish resources or discussions in Turkish as the only remedy for their problems.

Finally, students were asked if they had any additional comments. Here are some of them:

[1] One cannot learn a second language before mastering his/her first language thoroughly. First Turkish language education should be bettered.

[2] I am not successful because I cannot express myself in English. I study perhaps three times more than a student in Turkish-medium education does. Although I like my field very much, having to learn in English puts me off.

[3] A successful education can only be achieved in a language through which one can think. I believe foreign language medium education is the problem of developing countries.

[4] I entered this university since I thought that I could learn English in preparatory school. If I could ever imagine the conditions I would meet, I would not choose an English-medium faculty because, instead of making us able to follow world literature, it limited us with lecture notes.

[5] The only advantage I can think of with English-medium education is that you might find a better job or go abroad. Apart from that, it has no positive contribution to understanding the lectures or to improving ourselves in our fields. I believe we could understand our content lessons much better in Turkish.

[6] I believe this questionnaire will be useful. In my opinion, one should be educated in his/her own language and support it with an English course. Foreign language is now an inseparable part of the modern world, but for someone to think and be productive, she should know something in the first place. And this starts with learning. Through a language she could understand, namely, her own language. Only in this way can universities be places where science is produced.

And the following comments were given by teachers:

[1] This is a very controversial issue. Especially in terms of writing. Student can succeed in reading and understanding to some extent, but the process of writing is very problematic.

[2] Students should take their specialized courses after they are adequately prepared by

an intensive English programme.

[3]   Some students' lack of ability in expressing themselves in English stems from their inadequate Turkish. Those who are articulate in Turkish and those who are interested in culture and literature are trying harder to be efficient in English. Since they know that everybody in the class can speak Turkish, they choose the easy way and resort to Turkish.

[4]   The purpose of English-medium education is not to teach a foreign language, but to give Engineering education to the students who supposedly know the language. The only problem with this programme is the presence of students with limited English proficiency.

[5]   Thanks to English-medium education, students can follow foreign literature.

[6]   We should distinguish between foreign language education and education in a foreign language. The former one is very problematic but the latter is a necessity in today's world. English-medium education, no matter how difficult it is, provides us with certain privileges especially when the interventions of YOK (The Council of Higher Education) and level of education are taken into consideration. These privileges are: 1) we can be in constant contact with science circles all over the world, 2) hence the need to be productive 3) we can be protected from anti-democratic interferences directed to science 4) we are not short of resources like books, materials etc.

[7]   The only advantage of this university and its likes is that you can be in touch with world literature. The disadvantage is that we have no contribution to Turkish as a science language. I do not understand even what I read.

These comments and the overall results of the teachers' questionnaire stress the fact that students are not adequately prepared for English-medium education. They point out the fact that in order to be able to follow their courses in English students have to develop

their second language skills through an intensive English programme. This point again raises the issue of the inadequacy of the preparatory year at METU in terms preparing students for the demands of English-medium education. Another point teachers have commented upon is that English-medium instruction enables them to be in touch with world literature. It may be true as far as teachers are concerned but it does not justify English-medium education from the students' point of view since answers to the questionnaire suggest that students are not able to follow any literature except their textbooks.

As for the privileges provided by English-medium education, as one of the teachers claims [6], it only confirms the elitist nature of this policy. And we do not see how METU and its likes can be protected from anti-democratic interferences, as the same teacher puts it, since METU was one of the worst hit universities when YOK was empowered as the sole authority and hundreds of academics were fired or resigned in protest (see Chapter 3 for a discussion on YOK).

5.5 CONCLUSIONS

The evaluation results presented and discussed in this chapter suggest a number of general conclusions concerning the effectiveness of CBSLI programmes at METU. What is clear from the overall data is that CBSLI programmes at METU do not work as they stand. A number of profound changes are needed.

First of all, students should definitely be provided with more assistance to deal with their language-related problems because as it is, students feel they are not able to cope with English-medium education on their own. A possible solution might be to link up language courses with academic content courses as in North America.

Secondly, the fact that students are inadequately prepared for the demands of English-medium education raises the question of the efficacy of the preparatory year

offered by the University. As students' answers make it clear, the preparatory year is far from meeting its objective, namely, enabling students to pursue their specialized courses in English. More emphasis on the development of productive skills is needed.

Thirdly, students should be encouraged to produce more language in a low anxiety and supportive environment. Instead of being passive recipients all the time, they would feel they can contribute to the lesson by expressing themselves in the target language.

What is unfortunately clear from the students' self-evaluation and from the teachers' comments is that an overwhelming majority of students lack the ability and opportunity to engage in any meaningful, communicative activities in English. Much of the data suggest that students are not able to contribute input i.e. express their ideas and opinions, ask questions and clarify meaning, participate in discussions in English. Yet this is precisely what immersion methodology should facilitate. As Canale and Swain (1980:27) put it:

> the second language learner must have the opportunity to take part in meaning-ful communicative interaction with highly competent speakers of the language i.e. to respond to genuine communicative needs in realistic second language situation.

The inescapable conclusion is that unless the necessary changes are made to realize these conditions, Turkish-medium education supplemented by intensive English courses would clearly be a better alternative to CBSLI and one which 48% of students (see Table 5.36) actually favour. As it stands CBSLI can be effective in improving reading ability or receptive skills in the second language. However it does impede the development of students' productive skills despite the fact that they are exposed to "comprehensible input" for years.

We would like to conclude this chapter with a quotation from a sociology student

I suppose English-medium education has its own advantages but it is sometimes so frustrating for us not to be able to comment on a topic which we know much about only because of our limited proficiency and lack of confidence in using English.

CHAPTER 6

COMPREHENSIBLE INPUT, INTERACTION AND OUTPUT: OBSERVATIONAL DATA FROM IMMERSION CLASSROOMS IN MIDDLE EAST TECHNICAL UNIVERSITY

6.1 INTRODUCTION

In this chapter, we focus on what is actually happening in CBSLI classrooms at METU. The aim is to find out how CBSLI principles are being implemented in a Turkish context.

We will examine the language used by both students and teachers from the observational records of the classes surveyed at METU. We will not be using any observational scheme designed to quantify second language use in the classroom despite the current fashion "to equate quality in research with the application of a scientific methodology modelled on the natural sciences" (van Lier 1988:43). We indeed agree with van Lier that while the tabulation of classroom interaction using observational schedules and analyzing them statistically is an improvement over anecdotal reports, such methods do not actually contribute to our knowledge and understanding of what goes on in the classroom.

Van Lier proposes the alternative of recording, transcribing and engaging in close textual analysis of classroom interaction suggesting that classroom researchers should "let the data lead the way" (p.87). His point is that any observation and any classroom research -however scientific- are necessarily selective since there is no such thing as theory-free observation. What we look for in the classroom is determined by our assumptions about language learning, our attitudes and ideology about language learning and teaching.

Three considerations guided our classroom survey reflecting current theoretical perspectives on the nature of second language learning.

1. It has been hypothesised that one of the keys to learning a second language is exposure to 'comprehensible input' (see Krashen 1985 and Long 1983b). Our first step was therefore to investigate the kind of input which is provided to the learners in the classroom. Although it is difficult to define what comprehensible input is, we believe that the language used in the classroom by teachers -input is provided through teacher talk at METU- should be studied in order to see if there is any attempt to modify or adapt the language addressed to the learners according to their proficiency level in that language. Accordingly we examined:

a) the amount of teacher talk,

b) the quality of teacher talk,

c) the language of input: L1 or L2?

2. It has also been argued that comprehensible input is not simply the result of the speech adjustments made by native speakers but the product of interaction involving both the native speaker and the learner (Ellis 1992:32-3). This interactive approach to second language learning is predicated upon the view that interaction between teacher and student and between students facilitates the comprehensibility of input through participation and initiative-taking in the classroom. In addition to examining the nature of the input provided by the teacher, we therefore needed to find out what kind of interaction, if any, was taking place in the classroom. We looked at the following three aspects of interaction:

a) teachers' questioning style,

b) students' participation in interaction,

c) negotiation of meaning.

3. Finally, the comprehensible output theory (Swain 1985) claims that learners will develop their second language if they are given opportunities to produce the target language more frequently. So, we needed to focus on students' second language production in the classroom in order to find out to what extent these opportunities were provided in METU classrooms. Two aspects received special attention:

a) negotiation of meaning,

b) feedback on students' errors.

6.2 PROVISION OF COMPREHENSIBLE INPUT IN METU CLASSROOMS

As the comprehensible input hypothesis has already been fully examined in chapter one, let us just recall here that according to Krashen (1985), "humans acquire language in only one way -by understanding messages, or by receiving 'comprehensible input'" (p.2). For Krashen comprehensible input is the primary causal variable in second language acquisition.

Attention to the language to which a learner is exposed has resulted in a substantial amount of research on teacher talk in recent years. They all point to the fact that in all types of classroom settings teacher talk is important. It is all the more important when it is the major source of comprehensible target language input the learner is likely to receive. As Nunan (1991:7) explains

> the modifications which teachers make to their language, the questions they ask, the feedback they provide, and the type of instructions and explanations they provide can all have an important bearing, not only on the effective management of the classroom, but also on the acquisition by learners of the target language.

Hence, we will look at teacher talk in METU classrooms from the following points of view:

a) the amount of teacher talk,

b) the quality of teacher talk,

c) the language of input: L1 or L2?

6.2.1 Amount of teacher talk

A number of observational studies reveal that in all types of classrooms, whether they are content or language classrooms, teachers tend to do most of the talking (for a review of research on the amount of the teacher talk see Chaudron 1988). They "regulate the topics of discussion and its pacing and its direction; they decide who gets to talk, and for how long; finally, they judge what the students have to say and how they say it and correct them when it is deemed necessary" (Edwards and Furlong 1978 in Wong-Fillmore 1985:23). The list of teachers' rights in classroom discourse may be longer (see Ellis 1990). Of course, whether teachers choose to use these rights or not totally depends on the role distribution between teacher and students in the class.

If teachers use their superior status and act as "knowers", then the student is clearly put in a totally dependent position. However, if teachers act as "referees", then students will have more control over the conduct of their own learning (see Corder 1977). There-fore, it is the roles students and teachers adopt which control the nature of the linguistic environment and the amount of talk made by each participant.

What is evident from our data is that teacher speech dominates the classroom sug-gesting that the role the teacher adopts at METU is that of information-provider rather than facilitator. Although some degree of variability can be found, teachers talked more than students, sometimes more than 90%. In lessons 1 and 2, in particular, the amount of teacher talk was 100% of class time. In other lessons some degree of student participation was observed.

Whether predominant teacher talk should be regarded as good or bad largely depends on one's own assumptions about language learning. If one believes that learners

should be given opportunities to practise the target language as much as they read or hear it, then teachers' dominance is viewed as a drawback to learners' second language development.

On the other hand, if one looks at it from the viewpoint of the linguistic input it provides, then teachers' domination in classroom talk may be regarded as a valuable source of comprehensible input. In many foreign language classrooms, at METU for example, teacher talk is the only means of providing learners with live target language input.

It is, however, not merely a question of the amount of speech made available to the learner but of the value of this speech as potentially useful input for language learners. The language addressed to the class may not be comprehensible and students may not be able to attend to it. As Well's (1985) study has shown, quantity of speech itself is not sufficient for language development. Qualitative aspects are equally important.

In the next section we will look at these qualitative aspects of the language used by teachers in our study.

6.2.2 Quality of teacher talk

Besides being quantitatively sufficient, teacher talk has to be comprehensible, grammatical, precise and clear for it to be conducive to second language development. It is equally important for subject matter learning that students are exposed to this kind of language since it is the language which conveys information. Only through a clear and grammatical language can students understand concepts and work assignments.

When we observed the language used by the teachers for its quality, we particularly focused on the degree to which the teachers' presentation of materials and their attempts to interact with students were understood by them. We checked their methodology: the way they stated the objectives of the activity or assignment, their use of repetitions and

the grammaticality of the language they used in the class.

According to Wong-Fillmore (1985), the use of introductions and signals about what is to be done next in the lesson, guide the learners through an activity. An example of introduction patterns used in our classes can be seen below. In this excerpt the teacher introduces the lesson by using prior information about the topic of the day:

(1) Lesson 2

T: I would like to sum up what we did last time because some of
   you were not here and we were only few. And may I just make
   a review, a very short review to refresh your memories about
   the things that we talked about our mass-spectrography.

In the same lesson, the teacher relates new information to students' previous experience in the following manner:

(2) Lesson 2

T: If you remember we once mentioned having a mass-spectrometer
   coupled with gas-monotography. I said first... do you
   remember that?

We have also observed teachers telling students what to expect next. Fillmore (1985) argues that "such statements help to orient the students during the lesson; they tell them where they are in the lesson and where they are going next. In a sense, these are directions that help students to put what they are learning into a coherent mental framework." For example:

Now, let us try to demonstrate this by means of references ...

Now, let us try to understand what sort of a ...

Now, the problem is whether there is ...

Now, let's talk little bit about the third subtitle.

We have also found a fairly frequent recourse to repetitions. In this way, the teacher gives students opportunities to hear the same sentence with minor modifications so that they can get some clues as to alternative ways of saying the same thing. The following extracts (3) and (4) are clear examples of this practice:

(3) Lesson 4

S: Hocam, arasina nokta mi virgül mü koyuyoruz? [=Sir, are we going
    to put a point or a comma between (variables)]

T: That's comma. That's rule OK? Either use I told you comma
    or leave blank OK? That's the rule. I can either put commas
    there or leave a blank. So, that's true for very case in SPSS.

    That's called delimiter. One is comma, one is space ...[sic]

(4) Lesson 4

S: Variablelarda missing cases yada missing valuelari belirtirken,
    bir variableda sifir sifir kullanip digerinde nine nine
    kullanmak [=When indicating missing cases or missing values in
    the variables, to use zero zero in one variable and nine nine
    in the other]

T: It is not a very good way. If I were you I would be
    consistent. If I can make ... missing values 9, I use 9
    throughout all variables OK? So it is not a good idea in one
    variable to use 0 for a missing value, in other, next variable
    9... it confuses people. It is better to choose one of them
    and be consistent.

Wong-Fillmore (1985) found that an important feature of successful language class-rooms was the grammaticality of the language used by the teachers in lessons.

In the classrooms we observed, teachers' target language use was far from being native-like. The language they used frequently contained vague and confusing elements. As a result, students seemed to be confused and produced frequent incorrect answers to

the teachers' questions. The following extract illustrates both ungrammaticality and vagueness in teacher's English:

(5) Lesson 3

T: Now, let's assume that we have a single glass window and we have ...
and have a double glass window [sic]. Two types of windows, one is
single glass the other is double glass. In (xxx) conditions
(1 min. pause. teacher drawing figures on the board). Now, we have
two types of windows, four millimetres glass, single glass and
double glass. each one four millimetres ... again glass. Now, we
are asked what is the rela- what should be relative humidity
inside air ... in order to add surface conditions in this, on
this glass, that means we will find relative humidity at the inside
surface for the problem of single glass case and double glass case.
They both are the same, indoor and outdoor conditions ... Now
let's assume that they have certain temperature twenty degree
celsius outside air temperature minus seven degree and we will
find what is the relative humidity at the outside air in order
to have condensation on the surface of glass. How can we solve
this problem? [sic]

Ss: (murmurs)

S1: Hocam, bir daha söyleyebilirmisiniz? [=Sir, can you repeat that?]

T: OK, I will repeat it. The (xxx) conductivity of the glass
is given. It is zero point seventy eight but I want to use
one watt meter celsius. It is a different kind of glass.
I have a solution here. So I will use it one per one meter
celsius. So let's assume that thermal conductivity of glass is
one watt per celsius. Now, the question is indoor air temperature
twenty one degree celsius, now, it is twenty one degree celsius
here and outside air temperature is minus seven degree celsius.
We are asked in order to see condensation on the surface of
the glass, what should be the inside air relative humidity?
... how can we solve his problem? [sic]

S2: (Unidentified) çarpi- oradan çikaririz. Yani dew pointten

çikaririz. Oradan da... [=multipl- we get it from there. I mean
from dew-point. And then ...]

T: First, we find the surface temperature. Firstly, first of
all, we find the surface temperature inside surface and outside
surface temperature of the glass and then we will predict or
we will learn inside air dew-point temperature. For, if you, if
you see condensation on the surface of the glass, that means
inside surface temperature of the glass is equal to inside air
dew-point temperature. So you can find surface temperature and
then dry-bulb temperature at the inside surface should be less
than or equal to dew-point temperature at the inside air in
order to see condensation.

Another example of ungrammaticality in teacher's talk is given below:

(6) Lesson 3

T: The main difference, the important point here, double glass
have higher inside surface temperature decreases the
condensation risk.

Given the fact that at METU, teacher talk is the only source of live language input,
presenting defective language models may well have a detrimental effect on students'
language development. From the point of view of subject-matter learning, such ambigu-
ous and unclear language will affect students' academic performance too, since informa-
tion comes through English and comprehension of this language is essential for learning
to take place.

The general features of teacher talk that we have observed can be summarized as
follows: teachers avoid complex structures, using simple and short sentences. Directions
are, generally speaking, clear. There are attempts to make prior student experiences a
context for the interpretation of new experience. Repetitions are quite frequent. And so
are, unfortunately, ungrammatical and ambiguous uses of English.

We shall, in the following pages, further examine the kind of input provided by the teachers.

6.2.3 Language of input: L1 or L2?

All communication-oriented methodologies in second language learning support the use of the target language as the medium of instruction in the classroom. In this way, it is argued, learners are exposed to the appropriate language and prepared for face-to-face communication.

Immersion methodology, too, encourages the use of second language in the class-room. In fact, as Wong-Fillmore (1985) points out, keeping the two languages of instruction (L1 and L2) separate has been regarded as a crucial feature of the immersion approach.

Although the recommendation to use the target language for virtually all communication in the classroom does not seem to be controversial, carrying out this recommendation may not be so simple. We know that where teachers and students share a common language, Turkish for example at METU, both students and teachers will be tempted to switch back to that language. However, as Clark (1981:153 quoted in Franklin 1989) says, in CBSLI classrooms, when the teacher resorts to speaking the shared native language the message that is being given to the students is: "use English (first language in this case) when you have something real to say. Use the foreign language when we are doing exercises, question-and-answer work, and other unreal (non-communicative) things".

We know from teachers' responses to the questionnaire that a vast majority claim they use English in 80-100% of their class time. However, they also acknowledge the fact that they occasionally revert to Turkish in the classroom for the benefit of students with

limited English proficiency.

The examination of lesson transcripts proves them right since we observe an obvious determination on the part of teachers -with one exception- to use English all the time. In lessons 1 and 2 we find no occurrence of code-switching by the teachers. The whole lessons are conducted in English in both cases. In lesson 4, we believe it must have been particularly difficult for the teacher not to switch to Turkish since most of the students' questions or clarification requests came in Turkish. Still, he did not break into Turkish and answered them in English.

In lesson 3, however, the teacher switches back and forth between English and Turkish although he, too, at first seems to be determined not to use Turkish as the following two extracts illustrate. In the first one student asks for a repetition and the teacher responds in English saying that he will repeat the question he has asked.

(7) Lesson 3

T : How can we solve this problem?

Ss: (murmurs)

S1: Hocam, bir daha söyleyebilirmisiniz? [=Sir, could you repeat that?]

T: OK, I will repeat it.

In (8), the student gives an answer in Turkish which is unfortunately not considered to be worth commenting on since, as happened before, the teacher provides the answer himself without explaining why it is so and why the answer given by the student is wrong. However, we still see the teacher determined not to resort to speaking Turkish.

(8) Lesson 3

T: We are asked in order to see condensation on the surface of the glass, what should be the inside air relative humidity? ... How can we solve

this problem?

S: Carpi--- oradan çikaririz. Yani dew pointten çikaririz. Oradan da ...
[=multipl- we get it from there. I mean from dew-point. And then ..]

T: First, we find the surface temperature.

In the next example, however, the teacher responds to one of the students in Turkish for the first time. Thereafter he goes on lecturing in English while reverting to Turkish for clarifications and repetitions. That example also instantiates one of the rare occasions when a student initiates an interaction with a question (in Turkish) which seems to raise an important point. In that excerpt, the teacher writes a new problem on the blackboard and gives all the necessary information to solve it. The problem is how to find out the relative humidity for double glazed windows. The student requests information as to whether the gap between two glass panes is important for the solution. The teacher responds by saying that it is of course important (in Turkish) but does not offer any further explanation as to why this is so. Hence, once again an opportunity to sustain a meaningful interaction is missed.

(9) Lesson 3

T: So, we will find only T1 and at the inside surface

S : Hocam, aradaki boşlugu, önemli degil mi? [=Sir, the gap between, is it not important?]

T: Onemli tabii [=Of course it is]. Now the thickness between the glasses is approximately ten millimetre which is one centimetre (.70.). Now ten millimetre which is one centimetre (.70.). Now for our glass, know inside air (xxx). What can you say about the resistance in between these two glasses, that means inside...

The use of Turkish by the teacher gradually increases. As the next excerpt shows, the teacher now gives a lengthy translation to clarify a point he has made before and also foils two attempts by two students to ask questions:

(10) Lesson 3

T: Any questions? (.8.)

S1: Hocam, [=Sir]

S2: Hocam,

T: Yani şu camin arasinda condensation olmaz. Aslinda, aslinda bu iki
camin arasinda condensation olmaz dedigimiz zaman, er, çünkü eger
bunun içinde hava varsa, eger o hava da nemli hava ise, nem varsa,
o zaman condensation mutlaka olur. Cünkü havanin nemi mutlaka belli
bir sicaklikta condense olacaktir. Hatta, hatta bu arada hava sicakligi
düşerse mutlaka, ama çift camlar imal edilirken aradaki hava kuru
hava birakilir. Yani nemli degildir. Onun icin condensation riski bu
arada yoktur. Eger camin perçevesi catlaksa ve içeriye nemli hava
girmişse o zaman condensation olur. Yoksa buradan transfer olan hava
orada condense olmaz, çünkü buradan hava transfer olmaz.

[=Namely, no condensation can take place (between)in this glass.
In fact, in fact, when we say no condensation occurs between these two
glasses, er, because, if there is air in this, and if the air is
humid, if there is moisture, then condensation definitely occurs
because humidity of the air is going to be condensed at a specific
temperature. Besides, besides, in the mean time if the temperature
of the air falls, definitely but when producing double glass
windows air between is dry (OR dry air is left between the glasses).
Namely, it is not humid. Therefore, there is no condensation risk
in between. if there is a crack on the frame of the window and if
humid air came in, then condensation occurs. Otherwise, air which
is transferred from here is not condensed there, because air cannot
be transferred from here.]

We presume that the teacher, being aware of students' limited English proficiency,
is trying to ensure that everyone understands the topic that is being presented. This prac-
tice is clearly aimed at teaching subject-matter, but the problem is what kind of an effect
it has on language learning.

According to Wong-Fillmore (1985:35)

"language learning occurs when students try to figure out what their teachers and classmates are saying, when teachers through their efforts to communicate with learners provide them with enough extralinguistic cues to allow them to figure out what is being said, and when the situation is one that allows the learner to make astute guesses at the meaning of the language being used in the lesson."

Thus, translation has a negative effect on language learning because

when translations are used, teachers tend not to make the kinds of modifications in English that they might otherwise make. ...If we assume that these modifications enable learners to figure out what is being said, then the English that is being used in this way is not usable to them as input, and 2) when learners can count on getting the information that is being communicated to them in language they already know, they do not find it necessary to pay attention when the language they do not understand is being used (Wong-Fillmore 1985:35).

Resorting to translation instead of TL rephrasing, as does the teacher in our example, may well ease the learners access to subject matter but it cannot be said to foster attention to the TL and facilitate TL learning.

In Chapter two we have argued that students at METU are provided with limited input when compared with other programmes in North America. On the basis of our transcribed data, we can further assert that this input, besides being limited, is not linguistically rich and appropriate either. It is clear from students' responses to the questionnaire that this kind of restricted and occasionally incomprehensible input has a detrimental effect on their second language learning. The following sections will provide further data in this respect.

6.3 INTERACTION IN METU CLASSROOMS

Researchers in second language acquisition stress the role of interaction between teacher and students in second language learning. Allwright (1984), for instance, states that

Classroom interaction is important because interaction is the *sine qua non* (author's original emphasis) of classroom pedagogy. Interaction is the process whereby lessons are 'accomplished', to use Mehan's (1974) very apt term. If no person-to-person interaction had occurred in a classroom, we would probably be unwilling to accept that a lesson had taken place at all. From this point of view, then, there is no point in being 'for' or 'against' interaction, since it is an inescapable and inescapably crucial aspect of classroom life (p.159).

Chaudron (1988:10) also argues that interaction facilitates second language acquisition because "1) only through interaction can the learner decompose the target language structures and derive meaning from classroom events, 2) interaction gives learners the opportunities to incorporate the structure into their own speech (the scaffolding principle), 3) the meaningfulness for learners of classroom events of any kind, whether thought of as interactive or not, will depend on the extent to which communication has been jointly constructed between the teacher and learners (Allwright 1984; Breen 1985)".

Several studies have highlighted the importance of negotiated interaction. The theoretical point of departure for classroom interaction has been proposed in Long's (1983b) 'Interactional Hypothesis'. It is based on the claim that interactional modifications which aim at solving a communication difficulty help to make input comprehensible, which in turn promotes second language acquisition. These interactional adjustments, which are attempts to negotiate meaning in the classroom, include comprehension checks, confirmation checks, and clarification checks.

Seliger (1977) found that learners who maintained high levels of interaction in the second language progressed at a faster rate than learners who interacted little in the classroom (this study will be examined in further detail when discussing student-initiated interaction).

Pica (1987:8) also showed that "what enables learners to move beyond their current interlanguage receptive and expressive capacities when they need to understand unfamiliar linguistic input or when required to produce a comprehensible message are opportun-

ities to modify and restructure their interaction with their interlocutor until mutual comprehension is reached."

Is this kind of interaction actually taking place in classrooms at METU? We will now examine the findings of our classroom research to find out how learners and teachers interact in CBSLI classrooms. We will look at the following three aspects of classroom interaction:

a) teachers' questioning style,

b) students' participation in interaction,

c) negotiation of meaning.

6.3.1 Teachers' Questioning Style

One of the main factors influencing the quality and quantity of teacher-student interaction is teachers' questioning behaviour.

Ellis (1992:42) explains that teachers ask questions because

> questions require responses and therefore, they serve as a means of obliging learners to contribute to the interaction. Learners' responses also provide the teacher with feedback which can be used to adjust content and expression in subsequent teacher-talk. Second, questions serve as a device for controlling the progress of the interaction through which a lesson is enacted.

To Chaudron, questions asked of students are important since they "constitute a primary means of engaging learners' attention, promoting verbal responses, and evaluating learners' progress" (1988:126).

The types of questions that are asked by teachers have been the focus of a number of classroom surveys. In addition to open and closed questions, a further distinction has been made between display questions (the teacher already knows the answer) and referential questions (genuine information questions). The general assumption is that

display questions are less likely to promote learner productivity than referential questions. Ellis (1992) argues that referential questions might help create an acquisition-rich environment since they "allow the learner more opportunity to take part in her own learning. Second, referential questions are more compatible with a focus on meaning exchange (as opposed to form) which has been hypothesised to be necessary for acquisition to take place. Third, referential questions are more likely to result in extended learner responses" (p.43).

In their examination of ESL teachers' questions in the classroom, Long and Sato (1983) found that teachers asked fewer referential questions than display questions in classrooms. In non-classroom contexts, however, all the questions addressed to the learner were referential.

In another study, Brock (1986) investigated the effects of referential questions on ESL classroom discourse. The study was carried out with four experienced ESL teachers and 24 non-native speakers. Two of the teachers were trained to incorporate referential questions into classroom activity, while the other two were not. Each of the 4 teachers taught the same lesson to a group of 6 non-native speakers. Brock found that the treatment-group teachers asked significantly more referential questions than did the control- group teachers. It was found that students in the treatment-group classes gave significantly longer and more syntactically complex responses.

Now let us look at the situation at METU. What kind of interaction environment is formed by teachers' questioning style? Do they use the interactional adjustments that Long proposes? Do they allow students to take part in classroom interaction by means of referential questions, or do they use display questions?

In our analysis of transcribed data, one of the strategies used by the teachers is comprehension checks. Long (1983b) defines comprehension checks as expressions used

by the speaker (here it is teacher) to establish whether his/her own preceding utterances have been understood by the addressee (i.e. the student). As the following examples show, these questions do not even require answering since the teacher clearly expects mute agreement.

(11) Lesson 3

T: ... and we know the difference between. we know the difference in

   solid materials. *All right?*

(12) Lesson 4

T: And last time we discussed data modification card. OK? Let's keep those
   cards again quickly. First one was compute, second one was recode, OK?
   As I told you last time, we use these cards to modify, transform, to
   recalculate new variables, OK? out of the ones that there are in your
   data set. Very functional, all of them. OK? We use all of them very
   frequently, so you'd better learn them, OK?

(13) Lesson 4

T: And, you have done the job. *Now is this clear to anyone?*

Another conversational adjustment that Long proposes in his framework is confirmation check. A confirmation check is the speaker's query as to whether or not his (expressed) understanding of the interlocutor's meaning is correct: 'Oh, so you are saying you did live in London?' (Long 1983b:218).

In our data we do not find a single occurrence of a confirmation check. A possible explanation might be that teachers simply do not invite students to make elaborate statements and therefore do not need to resort to confirmation checks. On the whole, when students get the floor their utterances are produced in Turkish.

According to Long, clarification checks also help making input comprehensible. A clarification check is defined as a request for further information on the speaker's preceding utterances. It might be a WH question or an expression like 'I do not understand. What do you mean exactly?'

The following example is the only case in our data in which the teacher is observed to use a clarification check:

(14) Lesson 4

T: You can connect them by two that means from V1 to V4.

S: Can you write from V1 to absence?

T: Absence? No, you can alternatively say V1, V2, V3, V4, either one.

S: ID to absence.

T: ID to absence? What is absence?

S: (unintelligible)

In the above extract one of the students asks for a clarification. The teacher first does not understand what she means by 'absence'. He simply queries the word brushing it aside with a 'No' and spelling out his original statement. But the student comes back with another question. This time she wants to know if she can write from ID variable to absence. The teacher again repeats the student's question and asks what absence is. Clearly, the student is taken aback by this question: She falters and her answer is not comprehensible. And the teacher does not attempt to encourage her to reformulate her statement, which casts doubt on the genuineness of his clarification check.

Thus, as far as the availability of interactional adjustments in METU classrooms is concerned, it is difficult to say they occur frequently since, as we indicated earlier, we find only one instance of a clarification request from the teacher. In addition, no confirmation check occurs in our approximately 8-hour long recordings. The only

strategy widely used, in line with Long's propositions, is comprehension checks.

When seen in the light of traditional student-teacher relationship in the classroom, the findings seem to reflect the fact that the main concern of the teacher is not to involve the student in the lesson but to act as an information-provider. The style of content presentation can also explain the lack of interactional adjustments in METU classrooms. For the most part it is lecture format and does not call for any negotiation or restructuring moves.

In this teacher-centered approach, teachers use rhetorical questions as a means of moving the topic along as seen in the following examples:

(15) Lesson 1

T: Well, properties to be satisfied in general equilibrium analysis are
   the following: the first is efficiency in factor substitution.
 → What does that mean? Well, in other terms, it means an efficient
   allocation of resources.

(16) Lesson 2

T: ... the highest velocity, V3, V2 and V1. Is it all right? That is the
 → masses are (xxx). This means what? This means the lightest ion will
   reach the collector first.

This form of questioning obviously is not aimed at eliciting any response from the students. The teachers themselves give the answers to their questions. The following instances are only a few examples of the very many cases when the teachers are observed to provide the answers themselves.

(17) Lesson 1

T: Now let's try to demonstrate this by means of references to our
   simple supply and demand analysis. Let's suppose that we have quantity

here and price there. These are, (pointing at the graphs on the
blackboard) now, our demand and supply curves yielding an equilibrium
→ position at PE and QE. Does equilibrium exist? Yes, the answer is
→ yes. Is it stable and unique? It is unique in this case since you
have a downward sloping curve and upward sloping curve yielding a
unique equilibrium position. Now, equilibrium exists, it is unique
and it is also stable. You can easily understand the reason why.

(18) Lesson 1

T: But let's consider the following case. Suppose that you have an
upward sloping demand curve as in the case of (xxx). Then, suppose
→ that you have a supply curve. Does an equilibrium position exist?
The answer is yes. There is an equilibrium position at Pe, Qe.
→ But is it unique? The answer is also yes since these two curves
intersect at one point. So, equilibrium position is unique. Now
→ could you say anything about the stability? So it is unlikely that
the equilibrium position to be stable since if the price is at P1
there will be unsatisfied buyers still eager to buy some commodity
and they will persistently try to beat prices up. Here, equilibrium
is stable as well as existent and unique.

(19) Lesson 1

T: Well, if you are here, if you are trying to reach the equilibrium
→ position E1, can you attend an equilibrium position? The answer is yes
since you have excess supply for prices above Pe1 so therefore the
prices will be down.

(20) Lesson 1

T: So you have to write four demand relationships for commodities.
For commodity demands you can then write that demand for commodity X is
a function of the price of X, price of Y, and money incomes. OK? Where
does the money income come from?

Ss: (Silence and murmur from students)

T : Well, money income is generated by the employment of factor services.

In the following two examples, in particular, we see missed opportunities to elicit responses from the students. In both cases the teacher asks students what they think about the situations drawn very clearly on the blackboard. The next logical step for the teacher would have been to give students some time to think about the question and to answer it, most probably correctly since the teacher had presented more than a couple of similar examples before. Instead, the teacher again gives the answers himself and moves on to another topic depriving students of an excellent opportunity to engage in a meaningful interaction.

(21) Lesson 1

T: Now what about this situation? Suppose that you have demand curve
    and a supply curve of following (xxx). Here, let's suppose that
→ this is Q and suppose that this is S and this is P. What can you
    say about such a situation? Now, an equilibrium position
    does not exist. So, here you can say that you did not discuss after
    after all the stability and uniqueness properties of equilibrium
    position since it does not exist.

(22) Lesson 1

T: You have perhaps more than two equilibrium positions as I have
→ described here. Now what about the non-existent equilibrium position?
    Here, if you put Ed here and if you put price there you have ...

We observe the same practice in Lesson 2, too. Namely, the teacher asks the questions and provides the answers herself. Here, we should note that these two lessons, lesson 1 and lesson 2, are the ones in which not a single interaction between teachers and students takes place. There is no student participation, no request for clarification from the students or any attempt on the part of the teachers to involve the students in the lesson.

(23) Lesson 2

T: ... and we have different carrier gases for different
uses. for instance if you want to make a very quick analysis and
if you (xxx) column efficiency is not important at all, what sort
of carrier gas do you use? The light carrier gas will be our
preference.

Another characteristic observed in METU classroom interaction is the abundance of display questions. This practice is clearly not intended to give students opportunities for genuine interaction since when the teacher asks these questions in class, s/he almost always knows the answers. S/he is not really seeking information from the students, but rather checking up on them. The following examples illustrate that point:

(24) Lesson 1

T: Further you have to find Px and Py, that is to say,
prices of goods. Further we need to add two more things, yes?

Ss:The price of factors

T: Yes, you have to find W and I. Now let us indulge into a value ...

(25) Lesson 4

T: OK. I was telling you the structure of the regular or ordinary.
OK, there were a couple of sections in it. First one was task
definition, second one data modification. What was the third one?

Ss: Data selection card.

T: Data selection card. The fourth was procedure card and the
fifth one was task definition. ... And last time we discussed
data modification card.

The question in the following extract is another example of meaningless rhetorical questions. The question is a simple choice between alternatives indicated by rising intonation at the end of the sentence (... the detector temperature should be higher or lower

than the column?). This question encourages guessing since, even if the students have no idea about the correct answer, they will have a 50% chance of being right. Therefore, we cannot say that this question helps to determine whether or not students know the material or they pay attention to what the teacher is saying.

(26) Lesson 2

T: Now as far as the temperature of the column and the temperature of
detector goes, I think we discussed something that the detector
temperature should be higher or lower than the column?

Ss:Higher

T: Higher than the column temperature.

Only in Lesson 3 do we observe a few attempts -which do not produce the desired effect- to ask referential questions which call for responses containing more than one word. However, besides being too long, the questions are phrased in such a complex manner that they become incomprehensible and actually confuse students. As seen in extract (5), for example, the question elicits only a request for a repetition (in Turkish) from one student. The teacher tries to clarify it in a simpler fashion but, unfortunately, he is not very successful. Despite the vagueness of the question, however, one student is able to produce an answer in Turkish. He suggests that dew-point temperature might be the point of departure in solving the problem. As he is proceeding the teacher interrupts and once again provides the answer himself without explaining why it is so.

The relative abundance of teachers' display questions and the scarcity of referential questions suggest that contrary to the current methodological trend towards a more communicative use of the target language, students' in METU classrooms are given limited opportunities to engage in meaningful interaction. The nature of the questions asked by the teachers actually restricts the amount of student participation.

The scarcity of referential questions and the interactional gap between teachers and students may reflect not just the knowledge gap between them but also the age and hierarchical gaps. Teachers assume the role of authoritative purveyors of knowledge. And students accept their role as compliant receivers of knowledge, which leaves very little room for genuine negotiation.

Besides, the teachers' awareness of the learners' limited linguistic ability may not encourage much negotiation of meaning as probably teachers anticipate students' difficulties with using English. On the other hand, it may be the case that given the teachers' own imperfect command of the target language, they may feel reluctant to venture on the grounds of open-ended meaning negotiation.

Another issue concerning teachers' questioning style is the amount of time (wait-time) they allow after asking a question. There has been a lot of research on wait-time stemming from the belief that students should be allowed to have sufficient time before they are required to answer a question. In this way, it is argued, students are given a chance to respond and to contribute to the lesson. Holley and King (1971), for instance, found that when teachers of German increased their wait-time -they proposed a 5 second wait- students responses also increased following initial hesitations.

Another important piece of research on wait-time by Rowe (1974) also showed that extended wait-time would induce more participation by more students. In particular, the following effects of extended wait-time were observed:

1. There was an increase in the average length of student responses.
2. Unsolicited, but appropriate, student responses increased.
3. Failures to respond decreased.
4. There was an increase in speculative responses.
5. There was an increase in student-to-student comparisons of data.

6. Inferential statements increased.

7. Student-initiated questions increased.

8. Students generally made a greater variety of verbal contributions to the lesson.

In the METU classes we surveyed, however, we found no instances of wait-time extending more than a second, hardly enough for students to think about the question first and then figure out a response. Instead, in virtually all cases, teachers supplied the required response themselves. Given the fact that students' proficiency in English hardly enables them to contribute to the lesson, it is imperative that teachers should not deny them the opportunity to try and answer questions particularly when research on extended wait-time shows how beneficial it is all round.

In the following extract, for example, the teacher devotes the last ten minutes of the lesson to going over the material. She frequently refers to the drawing on the blackboard which shows how a mass-spectrometer works. She allocates a turn to one of the students and asks her what happens when the molecules enter the ionization area (this turn allocation to a specific student is the first and the last instance in our data). The question is clear and the answer is obvious. The only thing the student is supposed to do is to look at the blackboard and follow the arrows pointing to the post ionization area. But, unfortunately, the teacher does not wait long enough to give the student a chance to answer and, as in the many cases we have seen before, she gives the answer herself.

(27) Lesson 2

T: Now, once the molecules enter the ionization area, what did we say
     about it? Please, anyone of you remembering? Yes, Meltem? (Addressing
     one of the students) What did we say? Once the sample molecules enter
     the ionization area, now the molecules of the sample are ...

In the following extract, the teacher rephrases his original question a number of

times (see arrowed sentences). Obviously, when faced with such a series of questions, students do not know what the teacher is actually asking. The teacher does not seem to be very interested in any response from the students anyway since without waiting to allow students to formulate a response, he answers it.

(28) Lesson 3

T: Now we assume that if we have double glass window and then we
   will find the relative humidity at the inside air in order to
   see condensation on the surface of the glass. Let's find again
→ temperatures. Do we need, now this is temperature one, this
   is temperature two, this is temperature three and temperature
→ four. Do we need to find the temperature at each point here in
→ order to solve this problem? In order to solve this problem, the
   problem says that in order to see the condensation on the inside
   surface of the glass, what should be the indoor relative humidity.
   We need only to find T1 the others should not be, it is not
   necessary to find those temperatures because they are not
   important on the prediction of the relative humidity at the inside air.

(29) Lesson 4

T: Just because of this part of the assignment, problem was, I mean,
   you're supposed to write a couple of frequencies OK? One for
   nominal level variables, OK? One for ordinal level variables, one
→ for ratio level variable, OK? Now, how you gonna do it? Let's do it
   here. Let's say, gender is nominal, which is nominal OK.

To summarize our observations of classroom interaction induced by teachers' questioning style we can say:

1. Questions asked by teachers in the four lessons are very few. In the first two lessons, in particular, there is no attempt on the part of the teachers to involve students in the lesson either by display or referential questions. In these two lessons, the common practice is

comprehension checks (e.g. OK? and All right?) which do not elicit any response from the students at all. Very few clarification requests and confirmation checks occur.

2. In Lessons 3 and 4, virtually all the questions are 'closed' requiring little more than yes/no or single word answers from the students. Comprehension checks occur with substantial frequency. Unfortunately, teachers do not attempt to involve students in the lesson by way of referential questions which would promote a discussion environment in the class, and give students an opportunity to produce the target language. Instead, teachers use display questions, which, according to Gaies (1983:209), do not "invite learners to respond at length and, even less, to initiate new topics and thus sustain interaction. Therefore, the predominance of display questions seems to diminish the value of second language classroom interaction as a source for learner to obtain optimal input".

3. The teachers, for the most part, use a lecture format. They concentrate on the presentation of information ignoring the contribution of discussion to students' achievement. Students would have been more interested if they had been involved in discussions through questions of value and opinion. Therefore, we suggest that in addition to being able to make effective presentations, teachers need to know how to ask stimulating questions which would help students develop their understanding of the content and involve them more in the lesson.

4. Teachers do not allow students sufficient time to think about and respond to questions.

5. As a result, no interaction takes place in the classroom. Students are not invited to express opinions, a reflection of the traditionalist view of the learner as someone who has nothing to contribute and no part in controlling his/her own learning.

To the extent that this kind of interaction is representative of CBSLI practices at METU, very little opportunity is offered to students to communicate in English or to hear

it used for communicative purposes by others.

In the next section we will look at students' own contributions to interaction in the classroom.

6.3.2 Students' Participation in Classroom Interaction

Allwright (1984) strongly disagrees with the common notion that interaction is a unilateral activity the teacher initiates, controls and sustains in the classroom. He argues that "... interaction, by definition and in practice, is a 'co-production'. It is the product of action ... of all the participants. ...Classroom lessons are socially constructed events, no matter how strongly any one participant may dominate, nor how compliantly other participants may react" (p.159).

With this perspective of interaction which emphasizes the social nature of classroom behaviour involving both students and teachers, we can now look at how students at METU contribute to the management of interaction in the class.

Student participation in classroom interaction is analysed in terms of whether 1) a particular contribution is initiated by the student or 2) it is made in response to directions from the teachers.

6.3.2.1 Student-Initiated Questions

Although studies have not so far conclusively shown a direct relationship between learners' initiating behaviour and linguistic progress, it is generally agreed that if learners initiate interaction rather than simply follow a lead, they will benefit from the kind of input directed to them as a result of their initiative. It is believed that initiatives taken by learners "reflect the greatest degree of discourse control assumed by a learner, since they attempt to redefine (at least temporarily) the basis for interaction" (Gaies 1983:202).

Seliger (1977) was one of the first to draw attention to the relationship between input and interaction. He argued that learners who initiate interaction, seek and exploit opportunities to produce output which would generate more input from other learners and from the teacher. Therefore, learners who exploit practice opportunities in the target language would be more competent in that language than those who avoid any active contact with the second language.

According to Seliger, learners who engage in more practice with the language are better learners. He defines practice as "any verbal interaction between the learner and others in his environment" (p.265) and argues that practice aids retention. In other words, practice is a crucial aspect of the learning process in which the learner has to be involved cognitively and affectively. He refutes the idea that more exposure to a particular language results in mastery in that language. He asserts that "being exposed to a language is not like being exposed to a virus. One does not catch it automatically" (1977:275). The learner should initiate interaction, seek and exploit opportunities to produce output which would generate more input from other learners and from the teacher.

In the same study Seliger poses the question: 'Does practice make perfect?', and sets out to find out if the learners' participation patterns are related to their achievement in English. He deals with two different types of adult learners in a single ESL classroom. He identifies them as 'High input generators (HIGs)' and 'Low input generators (LIGs)'. The distinguishing feature of these two groups is the level of interaction they generate during and after instruction. He studies the verbal behaviour displayed by the groups and compares them for 1)interaction and achievement and 2) the extent of their target language use outside the class. In addition to studying their performance by way of a pre-test and a post-test, he gives his subjects a questionnaire called 'Language Contact Profile' to find out about their use of English outside the classroom. He concludes that HIGs outperform LIGs in English achievement and also tend to exploit practice oppor-

tunities outside the classroom. He explains the failure of LIGs by the fact that they are dependent on the language learning environment. They avoid contact with the target language whereas learners who engage in interaction with others inside or outside the classroom get more focused input and thereby progress faster.

Day (1984) attempted to replicate Seliger's findings by using a larger population. He failed, however, to find any supportive evidence for the hypothesis that high-input generators would develop greater proficiency. Yet it is generally agreed that learners' participation and initiating behaviour have a role to play in the development of language proficiency.

On the assumption that students' initiative does more good than harm, we wanted to find out whether there is any evidence of Turkish learners' initiative in classroom interaction.

The most common strategy used by students is non-comprehension signals. As seen in the following example, they represent a level of initiative-taking in the sense that the students refuse to sit back and let the teacher go on with the lesson. Instead, they ask for clarification. By this involvement, students make sure that instruction fulfills their own particular need to understand which is an important step to improve or to take control of their own learning. On the other hand, because these kinds of requests for repetition or clarification are formulated in Turkish, and not in the target language, they have no effect on language development. Here is the example:

(30) Lesson 4

T: Then you have of course correlation. Regression... here ...
   some other techniques that

S: Hocam bir şey söyleyebilirmiyim? [=Sir, can I say something?]

T: But these are the basic ones. What?

S: One-way?

T: These are one-way analysis of variance. These are one-way analysis
of variance ... Also we have multivariate procedures which handle
little more complicated problems ...

The following extract is also an example of a clarification request. The student
wants to know why the result is being written in cubic metres. The teacher explains the
reason. The student does not seem to be satisfied since he further asks why the result is
not given in grams. The teacher's response seems to be somewhat irrelevant to the
student's question. He says the result may be written in 'gm' or in 'gr' and goes on with
the lesson.

(31) Lesson 3

T: We will find only two dew-point temperature at point two.
So, we will write the resistance here (.10.). Now, we know our
...wood and concrete ... we will write resistance

S: Hocam niye? [=Sir, why?]

T: Burda metre ile carptigimiz icin metre kup. [=since we multiplied
it by metre here it is cubic metre]

S: Hocam gram degerini yazmayacakmiyiz? [=Sir, are we not going to
write its gram value?]

T: Farketmez, gm de olur gr de olur. Now we will find dew-point ...
[=It does not matter. It may be gm or gr]

The following extract shows students' attempts to individualize the instruction they
are receiving. In other words, they make it relevant to their own particular needs. All-
wright (1984:160) calls this strategy 'navigation' which he defines as "attempts to steer a
course between, round, or over the obstacles that the lesson presents for the participants".
For example:

(32) Lesson 4

S: Yani, formati doldururken mi öyle belirtiyoruz?
F degerlerini mi ... [=You mean we indicate that when
filling out the format? The values of F ...?]

T: No, that ... I looked at that F because that gives me
width of the variable OK? So you can combine these two.
These things apply both of them. You can combine all the
interval and ratio level variable in the third frequencies
card.

S: Mesela, diyelim ki 10 tane variable var. Sadece iki tanesini
yazabilirmiyiz? [=Let's say there are ten variables. Can we
write only two of them?]

T: Any two, let's say V1 another variable. So, you have to write
another set of frequencies card like this for interval and
ratio level variable. And, you have done the job. Good. Now is
this clear to anyone? Do you have any questions about procedure
and task definition card? (.17.).

S: Hocam, istatistige S4 yazdigimiz zaman medianlarini okur mu?
[=Sir, when we write S4 to the statistics, does it read the
medians?]

T: Yeah, yeah. OK. Mean, whatever, one. If you write 1 you get
mean. Those are the numbers, whatever. if you're gonna get mean
by 1, you wanna get mode, write 4, if you want variate, write 6,
there. If you want skewness write 8 and whatever you want.
Give the number. ... Any question about this?

S: Tüm variablar icin mi median, mode hesaplayacak, yoksa alttakileri,
P9 lari gördügü için mi? [=Is it going to find out median, mode
for all the variables, or the ones at the bottom because it sees
P9s?]

T: How would the machine know which variable ... You are the
one to decide. That's why you're doing one section for nominal
level variables. You know it how the machine will know that OK?

6.3.2.2 Responses to Questions

In the data we examined, examples of compliance i.e. student(s) simply doing whatever is expected of him/her, occur very frequently. The following instances are only a few examples of the very many cases:

(33) Lesson 1

T: Further you have to find what is the total amount of X and Y
    supplied by industries producing X and Y. Further you have to
    find Px and Py, that is to say, prices of goods. Further we
    need to add two more things, yes?

Ss: The price of factors.

T: Yes, you have to find W and I.

(34) Lesson 2

T: Now, as far as the temperature of the column and the temperature of
    detector goes, I think we discussed something that the detector
    temperature should be higher and lower than the column?

Ss: Higher

T: Higher than the column temperature.

(35) Lesson 4

T: OK. Let's find in SPSS book the options section of frequencies
    procedure and let's read through ... Ok. Let's see what kind of
    things we can accomplish by options there ... OK. In the book
    9 options are given to you. OK. let's see what option 1 does for
    us. (Teacher hands the book to one of the students asks her to
    read)

S: (reading from the book) Option 1(incomprehensible).

T: OK. If we have missing values in your data set, ...

Students' responses, as the above examples illustrate, are given to the 'closed' questions, that is to say that the response the student is expected to give is already known to the teacher. They constitute a significant proportion of students' total verbal activity in the classroom, but they are the product of teachers' checks on students' intake. As such, they do not enable students to shape classroom discourse according to their own ability and needs. They are not conducive to language development either since they elicit mechanical, drill-like answers from the students.

6.3.3 Negotiation of meaning

As a complement to the input hypothesis, Long (1983b) claims that comprehensibility of input is improved by modified input. Long also makes a distinction between modified input, modifications to the linguistic forms directed at non-native speakers (NNS), and modified interaction which refers to modifications to the interactional structure of NS-NNS discourse. Long (1983b) claims that modified interaction contributes more than modified input to making the input comprehensible.

Negotiation of meaning epitomizes modified interaction and, as such qualifies as one of the most effective ways of improving input comprehensibility. Gass and Varonis (1985) suggest that negotiation of meaning is an important device in the acquisition process because it allows non-native speakers the opportunity to make input comprehensible. They define negotiation of meaning as "exchanges in which there is some overt indication that understanding between participants has not been complete and there is a resultant attempt to clarify the non-understanding" (p.39).

According to Pica (1987) mutual understanding between learners and their interlocutors is important. She suggests that such mutual understanding can be reached "when the learner and interlocutor modify and restructure their instruction as a result of their requests for clarification or confirmation of each other's input and check on the

comprehensibility of their own productions" (p.4).

With this in mind, let us look for evidence of students' and teachers' attempts to make the content material comprehensible through the restructuring moves we mentioned above. We will first look at the excerpts in which the students ask the teachers to clarify or confirm the meaning of a particular message.

In (32), for example, the student indicates non-understanding by repeating the word 'one-way'. In response to the student's clarification request, the teacher repairs the utterance by repeating previously mentioned information. He does not provide new information and proceeds to describe other statistical procedures.

In the next example a student formulates a clarification check first and then two confirmation requests.

(36) Lesson 4

T: Put white there ... Where is the handout? ... It is here.
   White is the first one. Second one is Asian, West Indian,
   African ...

S: I write what?

T: OK. just white.

S: And that's enough?

T: Yeah. That's enough. Two in parenthesis. Go ahead. OK.

S: In here?

T: No, white is enough.

The two examples above are the only ones in which students direct their clarification or confirmation requests in English. The following examples are produced in Turkish.

In (5) the teacher is trying to formulate a problem. The student is clearly having difficulty in understanding what the question is actually asking. She asks for a clarification. The teacher's repetition, however, creates confusion again.

Examples (9) and (33) show the teacher abandoning negotiation as indicated by the teacher's comments: 'Now, the thickness between the glasses...', just as in (9) and in (33) 'Now, we will find dew-point...'

In the following example students take the initiative and question the accuracy of the teacher's statement. They try to reach a decision as to what dry-bulb temperature should be. This example offers an opportunity for genuine modified interaction or negotiation since both students and teacher are deeply involved in a discussion focused on meaning. From the point of view of second language learning, however, this exercise in meaning negotiation does not provide the learner with the opportunity to learn the language through using it since all the interactional moves by both teacher and students are conducted in Turkish.

(37) Lesson 3

S: Hocam galiba o yanliş, eksi üç olacakti. [=sir, I think that is
   wrong. It should have been minus three]

T: Hangisi? [=which one?]

S: Dry-bulb temperature, eksi beş eksi üç olmasi gerekir.
   [=minus five should be minus three]

T: Eksi üç olamaz ki, dry-bulb eksi dört oldugu icin, ... pardon
   eksi üç olacak. [=but it cannot be minus three, since dry-bulb
   is minus four... Excuse me, it will be minus three]

S: Orada bir yanlişlik var. [=there is something wrong]

T: O zaman şurayi biz degiştiririz. Lütfen. [=then we change
   it here. Please] I don't know the value you gave it from the
   chart.

S: Eksi üç hocam, eksi beş icin, icin... [=minus three sir,
   for minus five, for]

S: Eksi alti [=minus six]

S: Ama o zaman [=but then]

T: Now, five point celsius at the outside air, let's prepare
   a table. Point one, point two, point three and ...(.59.) Now
   this is the table showing ...

Despite the fact that restructuring moves by the students in our sample are made in Turkish with the exception of the first two excerpts, we believe that when the teacher chooses to expand the information he has given previously, he helps with the second language learning process by making the input a little more comprehensible than the first time.

In negotiation of meaning, requests for clarification or confirmation may also come from the interlocutor. As Pica (1987) argues, such requests facilitate social interaction and language production in the target language since the learner, when faced with such a request, will feel the need to repeat or reword his/her message till comprehension is achieved.

What is evident from our data, however, is that such restructuring moves on the part of teachers do not occur very frequently. Extract (14) is the only case in our data in which the teacher is observed to use a signal to indicate he does not understand what the student is saying.

Since answers to the students' and teachers' questionnaires suggested that students at METU are not capable of producing the target language, we expected that requests for clarification or confirmation from the teachers would be rare in English.

On the other hand, it might be argued that students' insistence on using Turkish

instead of English might stem from the fact that there is no linguistic demand placed on them to produce English. This issue will be discussed in the following section.

To summarize, observations of actual classroom activities at METU, point to the following: first of all, the pattern of interaction taking place in the classrooms is far from Allwright's concept of 'co-production' which sees interaction as a product of participants, i.e. teachers and students. METU interaction tends to be what Long (1983b) says it should not be, a device for the exclusive use of the teacher, instead of being the a two-way flow communication which he regards as the prime condition for interaction.

Secondly, teachers are not really seeking to create a genuine discussion environment. Instead, they concentrate on their own production of information and focus students' attention on what is being taught. Thus, the types of questions they ask are not intended to generate any verbal participation from the students. As a result, students' contribution is confined to answering factual questions and following instructions. They are not given opportunities to assume more responsibility in shaping and steering the discourse. They rarely take the initiative and when they do it is to request basic explanation which they feel necessary to understand the content.

Thirdly, from the point of view of second language learning, students' difficulties are patently obvious in that they never produce sentences of more than three words, and in that virtually all interaction initiated by them takes place in Turkish. We will deal with students' language of output in the following section.

6.4 COMPREHENSIBLE OUTPUT IN METU CLASSROOMS

In the preceding sections we considered two input-based hypotheses. The assumption behind these two theories is that in learning a second language, exposure to 'comprehensible input' is essential. This view has been complemented by interaction

hypothesis which claims that interaction between teacher and student and between students aids the comprehension of input through participation and initiative taking in the classroom. Language production is assigned an indirect role in language learning.

The Output Hypothesis, however, regards learners' production in the target language as an integral part of language acquisition. Swain (1985) does not propose the output hypothesis as an alternative to the input/interaction hypotheses but as an addition. While she acknowledges the importance of comprehensible input for second language learning, she claims that it is not sufficient to ensure that the learner will attain native-speaker level of grammatical accuracy.

The 'comprehensible output hypothesis' follows the rather traditional notion that the acquisition of a skill is dependent upon practice of that skill. She argues that

> One function of output is that it provides the opportunity for meaningful use of one's linguistic resources. [Frank] Smith ... has argued that one learns to read by reading, and to write by writing. Similarly, it can be argued that one learns to speak by speaking (1985:248).

She goes on to attribute more specific roles to output in second language acquisition. One is the opportunity which it provides the learner to test out hypotheses to see if they work. A second function is that using the language, as opposed to simply comprehending it, may induce the learner to move from semantic to syntactic processing (p.249). Therefore, "producing the target language may be the trigger that forces the learner to pay attention to the means of expression needed in order to successfully convey his/her own intended meaning" (p.249).

The evidence Swain offers for the output hypothesis comes from a research project carried out in Canada. In this study the nature of language proficiency of grade 6 immersion students learning French as a second language was examined. The subjects were given separate tests for grammar, discourse and sociolinguistic components. The results

indicated that learners failed to achieve native-speaker levels for the grammar and sociol-
inguistic components although they proved to be proficient in discourse component. On
the basis of this evidence Swain argued that the reason for students' inadequate grammat-
ical competence was not the lack of comprehensible input since they had been receiving
it for 7 years. The real reason, she speculated, was that students had limited opportunities
to produce the target language in the class and were not "pushed" in their output.

Here we should recognize the importance attached to 'pushed output' by Swain. She
believes that what is needed, along with comprehensible input, is a demand for
'comprehensible output'. Learners should be given opportunities to interact with interlo-
cutors in classroom settings in which they are 'pushed' to make their output comprehen-
sible. Thus, learners, when faced with requests from interlocutors to clarify or confirm
their original message, will attempt to produce more target-like output by modifying their
initial output. In so doing, they test hypotheses about the second language as well.

The common way of investigating 'pushed output' has been to study non-native
speaker's output in response to native speaker's signals of comprehension difficulty (See
Pica 1988, Pica et al. 1989) during meaning negotiation.

6.4.1 Negotiation of meaning

In the preceding pages, we focused on the role played by negotiation of meaning as
it makes the input more comprehensible for the learner. We have analyzed the interac-
tional data in terms of interactional moves by both teachers and students such as
confirmation and clarification requests.

Here, we will look at the same data from a different perspective, i.e., the extent to
which teachers' signals of comprehension difficulty in the process of meaning negotia-
tion, place a linguistic demand on students to make their output more comprehensible.

Will we see opportunities for students to produce the target language in METU class-rooms? Are students 'pushed' (in Swain's terms), that is, is there enough social and cog-nitive pressure to produce the language? Or is it missing in classroom settings at METU?

It is clear, from responses to the teachers' and students' questionnaires, that students do not feel able to participate actively in classroom communication and do not produce the target language largely because of their perceived low level of proficiency in English. We have also seen that during the preparatory year at METU, students do not get any training in productive skills which, makes it much more difficult for them to speak in English.

With all this in mind, we have looked at our data from CBSLI classrooms at METU. As we expected, we found very limited use of the target language by the students. This is probably because there is a lack of linguistic demand on students to use the target language. CBSLI classrooms at METU apparently does not provide the students with the opportunities to produce the target language.

In our analysis of data, as indicated earlier, we have found only one instance of a linguistic demand placed on the student to clarify her message:

(38) Lesson 4

T: You can connect them by two that means from V1 to V4.

S: Can you write from V1 to absence?

T: Absence? No, you can alternatively say V1, V2, V3, V4, either one.

S: ID to absence.

T: ID to absence? What is absence?

S: (unintelligible)

Thus, if one accepts that for successful second language learning to occur, learners' target language use should be stimulated by way of clarification questions, the evidence

just cited shows that such linguistic demands on students are extremely rare. This finding once more points to the fact that "not all content teaching is necessarily good language teaching" (Swain 1988:69) since what we see at METU is not language teaching but typical content teaching focusing on subject matter comprehension and even this requires negotiation.

To put it more bluntly, here is a complete list of students' utterances in English. We did not attempt to categorize them as phrase, clause or sustained talk as is done in most of the research on immersion classrooms in Canada since there are only 9 instances in the whole transcribed sample. These utterances, excluding student's reading aloud, are given below:

Lesson 3

- zero seventeen

- zero temperature

- fourteen point six

Lesson 4

- data selection card

- one way?

- can you write from V1 to absence?

- I write what?

- And that's enough?

- In here?

The rest of the students' verbal contribution to the lessons are produced in Turkish and/or in a mixed code, namely, Turkish and English as seen in (39) and (40).

(39) Lesson 4

S: Variablelarda missing cases yada missing valuelari belirtirken,
    bir variableda sifir sifir kullanip digerinde nine nine
    kullanmak

(40) Lesson 4

S: Tüm variablar için mi median, mode hesaplayacak, yoksa alltakileri
    P9'lari gördügü için mi? [=Is it going to find out median, mode
    for all the variables, or because it sees the ones at the bottom,
    P9s?]

6.4.2 Error Correction

The comprehensible output hypothesis also refers to the need to provide students with useful and consistent feedback about their errors in the target language.

One is certainly aware of the fact that the feedback provided by the teacher as a response to students' contributions is important in second language learning. Students should receive information about the correctness or incorrectness of their utterances.

In order to determine what error correction strategies are used by teachers at METU, we undertook a further analysis of the transcripts of the four immersion classes. We did not find a single occurrence of error correction, either in grammar or in pronunciation. There was no indication that teachers were concerned about pushing students toward a more accurate use of the target language. No feedback whatsoever was provided for the students about the correctness or incorrectness of their (albeit limited) contributions in the target language. Therefore, it seems reasonable to conclude that the absence of feedback by the teachers is likely to have a detrimental effect on students' second language development.

6.5 CONCLUSIONS

In essence, observations of immersion classes at METU demonstrate that what we see is not an actual integration of content and language teaching as advocated by proponents of immersion methodology. It is rather a typical pattern of content teaching as seen in first language medium classrooms. Three aspects of immersion instruction at METU have led us to this conclusion.

First of all, the availability of comprehensible input in the classroom context, an issue which has already been discussed in the previous chapter. At METU, neither learners nor teachers are native speakers of the target language. Nor do they work alongside native speakers of it. Nor do they have a target language environment. Therefore, it is not possible to talk about authentic input. What we see in a typical classroom setting at METU is a Turkish professor addressing a Turkish-speaking audience in a foreign language. Interacting with English native speaker peers within or without the classroom is out of question simply because there is no native-speaker to interact with.

Secondly, although there is no direct proof that interactional moves on the part of both students and teachers facilitates second language acquisition, there is a considerable amount of indirect evidence which supports the use of interactional modification moves in classroom discourse. However, our data show that such moves do not occur frequently in METU classrooms. In the classrooms we observed, there were very few confirmation and comprehension checks and even fewer clarification requests in teacher-to-student interaction. Given the nature of social interaction in the classroom where the teacher is perceived as an expert both in language and in subject matter and the student regarded as the passive receiver of information, these results make sense. Classroom discourse is not a two-way flow of information as Long (1983b) claims it should be. Thus, the unequal distribution of participation rights between teachers and students provides minimal opportunity for the restructuring of social interaction claimed to be necessary for second

language learning.

Thirdly, in terms of comprehensible output, classrooms do not provide the most favourable linguistic environment for second language learning. Teachers generate most of the input, the comprehensibility of which is questionable, and do most of the conversational work. In other words, teachers nominate the topics, and do most of the talking. As a result there is very limited scope for the use of the target language by students. Much of the data suggest that students are not able to express their ideas and opinions, to ask questions, to clarify meaning, and to participate in discussions in English. Thus, if one accepts the assumption that learners should be given opportunities to practise the target language as much as they read or hear it, then the lack of such opportunities in the classroom can be viewed as a serious drawback to learners' second language development.

We think that, in the light of the data we obtained from both questionnaires and classroom observations at METU, it is time to re-think the workability of an integration of content and language teaching.

CONCLUSIONS AND IMPLICATIONS OF THE STUDY

INTRODUCTION

In the preceding chapters the effectiveness of CBSLI has been discussed both on a theoretical and a practical level with respect to the Turkish context. The questions we sought data for were:

[1] Is the second language learning theory behind CBSLI supported by empirical evidence?

[2] Does the CBSLI classroom contribute to the students' second language development?

[3] Does the CBSLI classroom where the second language is used as a medium of instruction rather than object of instruction, contribute to students' content learning?

[4] Does the CBSLI classroom environment provide opportunities for the kind of input, interaction and output in the second language which have been claimed essential to promote second language acquisition?

Although this study has endeavoured to give answers to the above questions in the context of Turkey, the specific question of whether English should be used as the medium of instruction at some Turkish universities was seen as being embedded in the larger question concerning the use of English in education among underdeveloped countries.

The following section will review the findings under two headings: the theoretical and the empirical; and we will present an alternative to the use of English as the medium of instruction in the Turkish educational system.

THEORETICAL CONSIDERATIONS

In Chapter one we discussed the theoretical basis of CBSLI. We examined both CBSLI's underlying psycho-linguistic hypotheses and the empirical evidence supporting its effectiveness. We looked at the three CBSLI tenets:

[1] Integration of content learning with language teaching provides meaningful contexts for language learning;

[2] CBSLI classrooms generate comprehensible input which is necessary for successful language learning; and

[3] CBSLI provides a motivational basis for second language learning.

Our review of the literature showed that CBSLI was based on assumptions and hypotheses which were very weakly formulated. The input hypothesis, for example, claims that provision of comprehensible input is essential for second language learning but it does not clearly explain what comprehensible input exactly is.

Advocates of CBSLI also claim that content classrooms in which the second language is used as the medium of instruction provide students with the best opportunities to use the target language for meaningful communication. They cite evidence from Canadian French immersion programmes that students actually improve their second language proficiency because they use the target language as a vehicle for content learning. Therefore they assume, on the basis of numerous standard tests and quizzes, that immersion classrooms create that communicative environment in the second language.

Recent research on Canadian immersion programmes, however, proves that this not exactly the case. Contrary to the early studies which employed a traditional approach to evaluate the effectiveness of CBSLI (i.e. comparison of the results of French-only programmes with regular programmes on student learning achievements, as measured by

standard language proficiency tests and subject-related achievement tests), recent studies have focused on classroom observations to see to what extent the target language is used for communicative purposes in the class. The findings suggest that the use of target language for communicative purposes is very limited and students' second language proficiency is not that satisfactory despite their being immersed in 'comprehensible input' for years.

It becomes clear that there is more to second language learning than comprehensible input, namely, comprehensible output. A number of studies have shown that students are not encouraged to produce the target language. The opportunities they get for that purpose are very limited. The conclusion is that "not all content teaching is necessarily good language teaching" (Swain 1988:69).

This study has reached the same conclusion. As we found in Chapter five, integrating second language instruction into regular subject-matter instruction does not allow the second language to be learned and developed naturally as stated by CBSLI advocates.

In Chapter two, we argued that there does not exist two identical language situations and that the solutions to language problems applicable to a particular situation cannot be transferred to another with the expectation of similar results (Mackey 1978).

We attempted to show the similarities and differences between Canadian and Turkish contexts. We emphasized the fact that language education policies should pay attention to the language situation and to the social, cultural and historical circumstances in which immersion programmes came about. We indicated that there were a number of basic factors to be taken into account before embarking upon a wholesale adoption of the Canadian immersion model. These factors are:

[1]   Relative status and prestige of the mother tongue and the second language;

[2] Linguistic environment, i.e whether second language learning is confined to the classroom or it is supported outside;

[3] Incentives to learn a second language;

[4] Differences such as proficiency level of teachers, classroom size, amount of resources devoted to programmes;

[5] Amount of research carried out to document the effectiveness of immersion approach in the Canadian context.

Overlooking these factors, Turkish authorities have acted on the basis of the alleged economic and political benefits of English-medium education.

As discussed in Chapter three, the introduction of a foreign language as a medium of instruction in the Turkish educational system stems from the usefulness of English (or French) as a language of economic progress. It is claimed that English-medium education will facilitate the transfer of science and technology to Turkey from the West.

Political considerations also influence the choice of English as a teaching medium in some selected institutions. English is seen as a politically and culturally neutral language. It is also regarded as a means of strengthening the ties with Western countries and of securing a place among them.

As a result of historical, economic and political reasons and the deliberate language choices made by Turkish authorities, a huge demand for more English in education was triggered off. English came to be seen as being synonymous with education in spite of the large number of studies vindicating the role of the mother tongue in educational attainment (UNESCO 1953, Afolayan 1978, Adekunle 1972).

This study argue for the use of Turkish as the medium of instruction for a successful education since there is no evidence from studies in bilingual education to show that the

second language can be successfully used as a medium of instruction with positive language and educational results. The results of this study are no exception either.

EMPIRICAL CONSIDERATIONS

The first assumption underlying the empirical component of this study was that asking students' and teachers' opinions on a particular language education policy was the best way of determining the success or the failure of that programme. The second assumption was that in order to know if English-medium instruction worked in the classroom in terms of second language and content learning, one should go into the classrooms and see what was actually happening there.

The empirical data collected at METU showed that students' attitudes towards the use of English in education are guided by instrumental considerations. A vast majority of students said that they chose an English-medium faculty because they believed they would have a better chance of obtaining a good job. However, given a choice between English-medium instruction and Turkish-medium instruction supported by an intensive English programme, 48% would prefer the latter.

The questionnaire data also indicated that students made very limited gains in their command of English. Students reported having difficulties with speaking and writing and even with reading and listening. Relatively large minorities said that they could not manage academic tasks in English. Participating in discussions, in particular, seemed to be posing the most serious problem for students. They also acknowledged that their limited abilities in English were not transferable to non-subject-specific tasks. There was strong evidence, for example, that students' reading ability was strictly confined to their textbooks.

The data presented in Chapter six also confirmed that the CBSLI classroom environ-

ment did not provide opportunities for the kind of input, interaction and output in the second language which have been claimed essential to promote second language acquisition.

We pointed out stark differences between CBSLI programmes in North America and their Turkish counterpart with regard to the provision of 'comprehensible input'. We pointed to the fact that Turkish CBSLI offered restricted comprehensible input since it was provided through teacher talk only. Our investigation on the quality and quantity of teacher talk revealed that Turkish students were exposed to ungrammatical and ambiguous uses of English. Teachers switched back and forth between English and Turkish and then instead of target language rephrasing resorted to lengthy translations in Turkish which could not foster attention to the target language and facilitate target language learning. The examination of lesson transcripts showed that content presentation was of lecturing type and did not call for any negotiation or restructuring moves. It reflected traditional student-teacher relationships in the classroom in which the main concern of the teacher was to impart the information to students rather than to involve them in the lesson.

As a result of teachers assuming the role of authoritative purveyors of knowledge, there was no discussion environment in the class and students had hardly any opportunity to produce the target language. Students' contributions were confined to answering factual questions and following instructions. They rarely took the initiative in assuming more responsibility in shaping and steering the classroom discourse. And virtually all interaction initiated by students took place in Turkish reflecting their difficulties in producing English.

CONCLUSIONS AND IMPLICATIONS OF THE STUDY

Stated briefly, the study a) investigated the theoretical bases for integrating content

and language learning, b) investigated the factors that determined the introduction and continued use of the immersion approach in Canada and in Turkey, c) examined Turkey from a multidimensional perspective, d) collected and analyzed a variety of data in Turkey, and e) presented an alternative to English-medium instruction.

Neither the theory nor the empirical evidence seemed to support the case for the use of English as the medium of education. As it stood English-medium instruction did not contribute to students' second language development and could well have detrimental effects on content learning. It was therefore argued that more attention should be paid to how English might be taught as a subject more effectively.

To the author of this study, the use of Turkish as the medium of instruction at not only university level but all levels in education would be linguistically and educationally more beneficial for Turkish students. It is believed that the provision of a sound language education in the child's mother tongue is a prerequisite for the acquisition of other languages. After such a sound basis is acquired, English should be taught as a subject at all levels. The assumption here is that English can be learned and mastered well enough to follow scholastic work in it even if it is learned as a second language rather than as a medium of instruction. By doing so, we will avoid the side-effects accruing from the choice of English, namely handicapping students educationally, and making them passive and less responsive. We have already seen from the questionnaire results that students do not want to initiate or participate in any discussions. They remain largely passive, not because they are not intelligent or not active, but rather because instruction is given in a language they do not master.

We recognize that the reversal of current policies may not be feasible at the moment. But we hope that having identified their shortcomings, this study will lead to a re-evaluation of the choice of English as a medium of education or at least to some improvement.

The use of English as the medium of instruction in the educational system of Turkey has no conclusive theoretical and empirical support. A significant percentage of the student sample surveyed does not favour English-medium education. Up to 48% of students favoured the view that it would be more beneficial if lessons were conducted in Turkish, and supplemented by an intensive English course. The task to be undertaken, therefore, is to investigate how teaching English as a second language can be improved: this will mean improvement in materials, teacher training, clarification of goals, and research.

To conclude, we would like to advance a number of propositions which, we believe, require immediate attention from government as well as interested individuals and institutions.

[1] In our view the role of language in education needs to be emphasized if we wish to arrive at a more balanced and more comprehensive view of teaching and learning processes. Therefore studies on the importance of language as a tool of learning are needed.

[2] In spite of an on-going debate on foreign language-medium education, there is a lack of research. Additional research is needed on foreign-medium instruction at every level of the Turkish educational system. This study focused on one English-medium university in Turkey, METU. It has only touched on primary and secondary education. This is not because these are any less important than higher education, but they are large areas. Because of time constraints and lack of technical equipments etc. the scope of the study had to be limited since it is difficult to carry out such a comprehensive investigation into a multifaceted issue. We accept that it limits the value of the information, and needs supplementing by studies drawn from a wider range of English-medium institutions. This is a pioneering study and we are reassured by the fact that our empirical findings were consistent with our theoretical research and with our personal experiences.

[3] The lack of interaction between teacher and students in the classroom seems to be one of the most important problems the Turkish educational system faces. It was apparent from classroom observations that teachers assumed an overwhelmingly prescriptive role. They did not give students any opportunity to learn through exploratory talk and discussions. Any consideration of classroom methodology should involve a consideration of the relationship between creative dialogue and learning.

[4] The supposed benefits of English-medium education should not be sought at the expense of content learning.

[5] For the short-term, English may continue to be used as a language of science and technology. However, in the long-term, considering that we do not seem to have made any significant breakthroughs in science and technology after all these years of English-medium education, we should start to focus instead on the Turkish language which the majority of our people can identify with and thus utilize. Turkish needs to be developed and modernized as a language of mass-education to facilitate effective learning in science and technology and also to disseminate scientific concepts and technological know-how. The Turkish Language Society (TDK) should be responsible for developing and disseminating Turkish terminologies in specific fields like physics and chemistry, and should work in co-operation with the universities.

[6] Conferences and workshops should be held from time to time to encourage linguists and educationalists to publish Turkish material on science and technology as well as on language teaching methodologies.

As a conclusion we stress the importance of having a clear language policy which will specify the future role of English and Turkish in the Turkish educational system. We should know why and how much we need English. Once our objectives are clear we can

determine how to put them into practice.

APPENDIX A

STUDENTS' QUESTIONNAIRE

CONTENT-BASED SECOND LANGUAGE INSTRUCTION RESEARCH PROJECT
UNIVERSITY OF KENT AT CANTERBURY

Dear Student,

As a researcher in the Department of Applied Linguistics at the University of Kent at Canterbury, I am currently involved in a research project on content-based second language instruction (CBSLI) at university level in Turkey.

The purpose of the questionnaire you are kindly asked to fill out is to evaluate the present state of the English programmes offered at the University, and to get students' feelings and suggestions towards learning through the medium of the target language.

Please be assured of the utmost confidentiality of your responses. The questionnaire will be handled by the researcher only, for data analysis purposes, and there is no possibility that your name could be connected with your responses.

We appreciate your contribution which we hope will be very valuable in making valid recommendations to the Education authorities.

Zuhal AKUNAL

CONTENT-BASED SECOND LANGUAGE INSTRUCTION RESEARCH PROJECT

STUDENTS QUESTIONNAIRE

PLEASE DO NOT WRITE YOUR NAME

1. Sex: [ ] Female   [ ] Male
2. Age:
3. Academic level:
4. Major (Engineering, psychology etc.):
5. Time studying English (either as a subject or as a medium of instruction):

LANGUAGE PROFICIENCY

6. How well can you understand spoken English? Tick ( ) *one* alternative.

[ ] a) I understand everything that is said by Turkish as well as by native speakers

[ ] b) I understand everything that is said by Turkish people but not everything that is said by native speakers

[ ] c) Enough to understand most (but not all) of what is said

[ ] d) Only a few words

[ ] e) Not at all

7. How well can you speak English?

[ ] a) I can speak fluently

[ ] b) Well enough to communicate most ideas

[ ] c) Well enough to communicate simple ideas and requests

[ ] d) Only a few words

[ ] e) Not at all

8. How well can you read English?

[ ] a) I understand everything I read

[ ] b) I can understand most of what I read (with a dictionary)

[ ] c) I can understand about half of what I read (with a dictionary)

[ ] d) I can understand only a few words when I read

[ ] e) Not at all

9. How well can you write English?

[ ] a) I can write with native-like level

[ ] b) Well enough to communicate most ideas with few errors

[ ] c) Well enough to communicate simple ideas, requests with many errors

[ ] d) Few words with difficulty

[ ] e) Not at all

We are interested in finding out how you rate yourself on the following kinds of academic skills. Please tick one alternative which best describes your own self-assessment of each skill.

10. Getting the essential information when taking lecture notes

a[ ] Excellent   b[ ] Very good   c[ ] Good   d[ ] Fair   e[ ] Poor

11. Taking organized and readable lecture notes

a[ ] Excellent   b[ ] Very good   c[ ] Good   d[ ] Fair   e[ ] Poor

12. Remembering what I've read

a[ ] Excellent   b[ ] Very good   c[ ] Good   d[ ] Fair   e[ ] Poor

13.Knowing how to organize your ideas on an essay exam

a[ ] Excellent   b[ ] Very good   c[ ] Good   d[ ] Fair   e[ ] Poor

14.Participating in class discussions

a[ ] Excellent   b[ ] Very good   c[ ] Good   d[ ] Fair   e[ ] Poor

15. How satisfied are you with your own success in learning through the medium of English?

a[ ] Extremely satisfied | b[ ] Very satisfied | c[ ] Satisfied | d[ ] Slightly satisfied | e[ ] Not satisfied

In this section, we would like to know about other benefits which you feel you received from learning through English.

16. Increased self-confidence

a[ ] Extremely helpful | b[ ] Very helpful | c[ ] Helpful | d[ ] Slightly helpful | e[ ] Not helpful

17. Ability to participate in class discussions

a[ ] Extremely helpful | b[ ] Very helpful | c[ ] Helpful | d[ ] Slightly helpful | e[ ] Not helpful

18. Increased your interest in the subject matter

a[ ] Extremely helpful | b[ ] Very helpful | c[ ] Helpful | d[ ] Slightly helpful | e[ ] Not helpful

19. Increased your interest in learning a foreign language

a[ ] Extremely helpful | b[ ] Very helpful | c[ ] Helpful | d[ ] Slightly helpful | e[ ] Not helpful

20. Improved your understanding of concepts and principles in the field

a[ ] Extremely   b[ ] Very   c[ ] Helpful   d[ ] Slightly   e[ ] Not
helpful   helpful   helpful   helpful

21. Since taking your content classes in English, have you noticed an improvement in your ability to use English?

a [ ] Yes   b [ ] No   c [ ] Not sure

22. If the answer to the above statement is YES, please indicate which skills you feel have improved and which are the same as before.

	Same as before	Improved
Understand lectures		
Take notes on lectures		
Understand discussion		
Participate in class discussions		
Read textbook in major		
Read in other areas		
Write papers in major		
Write in other areas		
Understand films		
Present oral reports		

ATTITUDE TO INSTRUCTION IN ENGLISH

23. What was the role of the following factors for your choosing a faculty in English? (Rank the five choices from most important (1), to least important (5).)

[ ] a) to have a much better chance of obtaining a good job

[ ] b) to have a much better chance of studying abroad or obtaining
      a job abroad

[ ] c) to keep myself better informed about developments outside Turkey

[ ] d) to become more sensitive to the values and traditions of
      people from various parts of the world

[ ] e) to have better access to world literature

24. How do you feel about English being used as a medium of instruction?

[ ] a) very much in favour

[ ] b) in favour

[ ] c) neutral

[ ] d) opposed

[ ] e) very much opposed

25. Do you think that it would be more beneficial if lessons were done totally in Turkish,

supplemented by an intensive English course?

a [ ] yes   b [ ] no

26. What have been your most important problems in taking courses in English?

27. What (if anything) has been helpful in an important way in lessening these problems?

28. How important do you think your knowledge of English will be to your future career?

[ ] a) very important

[ ] b) moderately important

[ ] c) slightly important

[ ] d) not at all important

INSTRUCTOR AND COURSE EVALUATION

How do you evaluate the following aspects of CBSLI programme?

	Excellent	V. good	Good	Fair	Poor
29.Teachers' knowledge of course materials&content					
30.Teachers' preparation and organization					
31.Teachers' concern for students' lang. problems					
32.Teaching methods used in the class					
33.Teachers' ability to explain in English					
34.The general proportion of class time involved in English					
35. Overall rating					

Additional Comments:

Thank you for your cooperation.

TEACHERS' QUESTIONNAIRE

CONTENT-BASED SECOND LANGUAGE INSTRUCTION RESEARCH PROJECT
UNIVERSITY OF KENT AT CANTERBURY

Dear Colleague,

As a researcher in the Department of Applied Linguistics at the University of Kent at Canterbury, I am currently involved in a research project on content-based second language instruction (CBSLI) at university level in Turkey.

The purpose of the questionnaire you are kindly asked to fill out is to evaluate the present state of the English programmes offered at the University, and to get teachers' feelings and suggestions towards teaching through the medium of the target language.

Please be assured of the utmost confidentiality of your responses. The questionnaire will be handled by the researcher only, for data analysis purposes, and there is no possibility that your name could be connected with your responses.

We appreciate your contribution which we hope will be very valuable in making valid recommendations to the Education authorities.

Zuhal AKUNAL

CONTENT-BASED SECOND LANGUAGE INSTRUCTION RESEARCH PROJECT

TEACHERS QUESTIONNAIRE

1. Sex: [ ] Female   [ ] Male

2. Age:

3. Grade(s) taught:

4. Size of class(es): Your average class size:

5. Years of teaching experience:

6. Years of teaching at present university:

7. Degree(s) held:
   [ ] Masters   [ ] PhD

8. Are you a native speaker of English or not?

   [ ] yes   [ ] no

9. How fluent are you in English?

[ ] a) native speaker fluency

[ ] b) fluent and confident but occasionally make minor errors

[ ] c) a bit rusty, but with a bit of practice could be fluent again

[ ] d) confident with junior classes, but not at post 'O' grade

[ ] e) other

10.Have you got any special training or instruction before being required to teach this course in English?

   [ ] yes   [ ] no

ATTITUDE TO INSTRUCTION IN ENGLISH

Please indicate your personal feelings about the truth of each statement listed below by ticking the one that best indicates your judgment of the truth of that statement.

11. All students in this school system should learn English.

a[ ] Definitely true   b[ ] Probably true   c[ ] Uncertain   d[ ] Probably false   e[ ] Definitely false

12. There is good co-operation among teachers of content and language teachers at this university.

a[ ]Definitely true   b[ ]Probably true   c[ ]Uncertain   d[ ]Probably false   e[ ]Definitely false

13.The students' general creativity is enhanced by the introduction of a second language as a medium of instruction.

a[ ]Definitely true   b[ ]Probably true   c[ ]Uncertain   d[ ]Probably false   e[ ]Definitely false

14.The self-confidence of the students is detrimentally affected by their having to learn through a second language.

a[ ]Definitely true   b[ ]Probably true   c[ ]Uncertain   d[ ]Probably false   e[ ]Definitely false

15.This programme has decreased the satisfaction I receive from teaching.

a[ ]Definitely true   b[ ]Probably true   c[ ]Uncertain   d[ ]Probably false   e[ ]Definitely false

16.At the present time, what percentage of your class time is actually in English?

[ ]0 - 19%   [ ]20 - 39%   [ ]40 - 59%   [ ]60 - 79%   [ ]80 - 100%

17.Please indicate how important the following situations are in terms of their contribu-

tion to your success in using English all the time in the classroom? (Rank the five choices from most important (1), to least important (5).)

[ ] a) the size of the class
[ ] b) how tired I am on a given day
[ ] c) my confidence in speaking English
[ ] d) the reaction of pupils when I speak in English all the time
[ ] e) the presence of many low ability pupils in the class

18. What additional reasons might prevent a teacher from maintaining the use of the target language?

19. Do you think that teaching subject matters in English affects students' proficiency in that language negatively or positively? (Please explain).

20. Do you use any specific methods or teaching strategies to accomodate students with limited language proficiency in content classes?

[ ] No
[ ] Yes (Please explain)

21. What strategies do you use for teaching vocabulary and error correction?

22. Do you use small group, peer-peer or cooperative learning in your classes? How? When?

[ ] No
[ ] Yes (How? When? Please explain)

23. What materials do you use (eg. curricula, texts, videos) in your classes? Are they English or Turkish materials?

Additional Comments:

Thank you for your cooperation.

APPENDIX B

QUESTIONNAIRE FORMS (IN TURKISH)

ALAN DERSLERININ YABANCI DILDE OGRETILMESI
KENT UNIVERSITESI, CANTERBURY

Sevgili ögrenci,

Kent Universitesi, Canterbury, Uygulamali Dilbilim Bölümünde Türkiye'de özellikle üniversite düzeyinde alan derslerinin Ingilizce araciligiyla ögretilmesine ilişkin bir çalişma yürütmekteyim.

Bu anketin amaci Orta Dogu Teknik Universitesinde Ingilizce ile egitim uygulamasinin bugünkü durumunu degerlendirmek ve ögrenci arkadaslarin bu uygulamaya iliskin düşünce ve tutumlarini saptamaktir.

Anket yalnizca tarafimdan veri incelemesi amaciyla kullanilacagindan ankete verdiginiz yanitlar gizli tutulacaktir.

Incelemenin tamamlanmasi ve yetkili makamlara gerekli önerilerin iletilmesindei cok yararli olacagina inandigim katkilariniz için çok teşekkür ederim.

Zuhal AKUNAL

ALAN DERSLERININ YABANCI DILDE OGRETILMESI:
ARASTIRMA PROJESI

KENT UNIVERSITESI, CANTERBURY

OGRENCI ANKETI

LUTFEN ISMINIZI YAZMAYIN

1. Cinsiyet: a. [ ] Kadin   b. [ ] Erkek
2. Yaş:
3. Sinif:
4. Bölüm (Mühendislik, psikoloji vb.):
5. Ingilizce çaliştiginiz toplam süre (egitim dili veya ayri bir ders olarak):

DIL YETERLILIGI

6. Ingilizce anlama becerinizi nasil degerlendiriyorsunuz? (Lütfen bir seçenegi X ile işaretleyiniz.)

[ ] a) Türklerin yada Ingilizceyi anadili olarak konusanlarin söyledikleri herşeyi anlayabilirim

[ ] b) Türkler tarafindan söylenen herşeyi anlayabiliyorum ama Ingilizceyi anadili olarak konuşanlarin söyledigi herşeyi anlayamiyorum

[ ] c) Söylenenlerin hepsini olmasa bile çogunu anlayabiliyorum

[ ] d) Yalnizca bir iki sözcük anliyorum

[ ] e) Ingilizce söylenen hiç bir şeyi anlayamiyorum

7. Ingilizce konuşma becerinizi nasil degerlendiriyorsunuz?

[ ] a) Akici ve dogru

[ ] b) Fikirlerimin çogunu iletebiliyorum

[ ] c) Basit tümcelerle fikirlerimi iletebiliyorum

[ ] d) Yalnizca bir iki sözcük kullanabiliyorum

[ ] e) Konuşma becerim yetersiz

8. Ingilizce okuma becerinizi nasil degerlendiriyorsunuz?

[ ] a) Okudugum herşeyi anlayabiliyorum

[ ] b) Okuduklarimin çogunu anlayabiliyorum

[ ] c) Okuduklarimin yarisini (sözlük yardimiyla) anlayabiliyorum

[ ] d) Okuduklarimdan yalnizca bir iki sözcük anlayabiliyorum

[ ] e) Okuma becerim yetersiz

9. Ingilizce yazma becerinizi nasil degerlendiriyorsunuz?

[ ] a) Anadilimde yazdigim gibi yazabiliyorum

[ ] b) Düşüncelerimin çogunu bir iki hata yapsam bile
iletebilecek kadar yazabiliyorum

[ ] c) Basit tümcelerle fikir ve isteklerimi iletebilecek
kadar yazabiliyorum

[ ] d) Zorlukla bir iki sözcügü biraraya getirebiliyorum

[ ] e) Yazma becerim yetersiz

Asagidaki sorular çalisma becerilerinizi degerlendirmenize iliskindir. (Lütfen uygun

seçenegi X ile işaretleyiniz.)

10. Ders notlari alirken asil önemli bilgiyi yakalayabilmede

a)Mükemmel   b)Cok iyi   c)Iyi   d)Orta   e)Yetersiz

11. Okunabilir ve düzenli ders notlari almada

a)Mükemmel   b)Cok iyi   c)Iyi   d)Orta   e)Yetersiz

12. Okuduklarimi animsada

a)Mükemmel   b)Cok iyi   c)Iyi   d)Orta   e)Yetersiz

13. Yazili sinavlarda düsüncelerimi düzenleyip kagida dökebilmede

a)Mükemmel   b)Cok iyi   c)Iyi   d)Orta   e)Yetersiz

14. Sinifiçi etkinliklerine katilabilmede

a)Mükemmel   b)Cok iyi   c)Iyi   d)Orta   e)Yetersiz

15. Alan derslerinizi Ingilizce araciligiyla ögrenme başarinizi ne ölçüde yeterli buluyorsunuz? (Lütfen seçeneginizi X ile işaretleyiniz.)

a[ ]son derece   b[ ] oldukca   c[ ] yeterli   d[ ] az yeterli   e[ ] hic yeterli

yeterli   yeterli   degil

Asagidaki bölümde Ingilizcenin egitim dili olarak kullanilmasinin size sagladigi yararlar ögrenilmek istenmektedir.

16. Kendime güvenimin artmasinda

a [ ]son derece   b [ ]oldukca   c [ ]yararli   d [ ]az yararli   e [ ]hic yararli

yararli   yararli   degil

17. Sinif içi etkinliklerine katilma becerime

a [ ]son derece   b [ ]oldukca   c [ ]yararli   d [ ]az yararli   e [ ]hic yararli

yararli   yararli   degil

18. Kendi alanima duydugum ilginin artmasinda

a [ ]son derece   b [ ]oldukca   c [ ]yararli   d [ ]az yararli   e [ ]hic yararli

yararli   yararli   degil

19. Ikinci bir dil ögrenme istegimi arttirmada

a [ ]son derece   b [ ]oldukca   c [ ]yararli   d [ ]az yararli   e [ ]hic yararli

yararli   yararli   degil

20. Alanimdaki ilke ve kavramlari anlama yetenegimi gelistirmede

a [ ]son derece   b [ ]oldukca   c [ ]yararli   d [ ]az yararli   e [ ]hic yararli

yararli   yararli   degil

21. Icerik derslerinizi Ingilizce almaya başladiginizdan beri Ingilizce kullanma düzeyinizde bir ilerleme g*:ozlediniz mi?

a. [ ] Evet   b. [ ] Hayir   c. [ ] Emin degilim

22. Yukaridaki soruya yanitiniz *Evet* ise, lütfen hangi becerilerinizin geliştigini ve hangilerinin ayni kaldigini X ile işaretleyiniz.

	Ayni kaldi	Gelişti
Derslerin icerigini anlama		
Ders notlari alma		
Tartişmalari anlama		
Tartişmalara katilabilme		
Alanimdaki kaynaklari okuma		
Diger alanlarda okuma		
Alanimda yazili odev hazirlama		
Diger alanlarda yazma		
Izledigim filmleri anlama		
Sozlu rapor sunma		

INGILIZCENIN EGITIM DILI OLARAK KULLANIMI KONUSUNDAKI TUTUMUNUZ

23. Ingilizce egitim yapan bir fakülte seçmenizde aşagidaki etmenlerin rolünü belirtiniz.

(Lütfen önem sirasina göre 1'den (en önemli) 5'e (en önemsiz) kadar numaralandiriniz.)

[ ] a) Iyi bir iş bulabilme olasiligini artirmak
[ ] b) Yurt dişinda okuma veya çalişabilme şansina sahip olabilmek
[ ] c) Türkiye dişindaki gelişmeler konusunda bilgilenmek
[ ] d) Dünyanin farkli yerlerindeki insanlarin gelenek ve deger
        yargilarina duyarli olabilmek
[ ] e) Dünya litaratürünü izlemek

24. Ingilizcenin egitim dili olarak kullanilmasi konusundaki tutumunuz?

[ ] a) Kesinlikle destekliyorum
[ ] b) Destekliyorum
[ ] c) Cekimserim
[ ] d) Karşiyim
[ ] e) Kesinlikle karşiyim

25. Sizce derslerin yogun bir Ingilizce programi ile desteklenip tamamen Türkce yapilmasi daha mi uygun olur?

[ ] a) Evet   [ ] b) Hayir

26. Alan derslerini Ingilizce araciligiyla ögrenmede karsilastiginiz önemli sorunlar nelerdir?

27. Bu sorunlar konusunda uyguladiginiz ya da uygulamayi düşündügünüz çözüm yollari varsa belirtiniz.

28. Ingilizce bilginizin gelecekteki meslek yaşaminizda ne kadar önemli olacagini düşünüyorsunuz?

[ ] a) Cok nemli
[ ] b) Oldukca önemli
[ ] c) Biraz önemli
[ ] d) Hic önemli degil

OGRETMEN VE DERS DEGERLENDIRMESI

Alan deslerinin Ingilizce araciligiyla ögretilmesinde bu dersleri veren tüm ögretim

elemanlarini gözönüne alarak aşagidaki secenekleri nasil degerlendirdiginizi belirtiniz.

	Mukemmel	Cok iyi	Iyi	Fena degil	Kotu
29.Ogretim elemanlarinin alan ve kaynak bilgisi					
30.Ogretim elemanlarinin ders hazirlik ve organizasyonu					
31.Ogretim elemanlarinin ogrencilerin dil sorunlarina karşi gosterdikleri ilgi					
32.Sinifta kullanilan ogretim yontemleri					
33.Ogretim elemanlarinin dersi Ingilizce sunma becerisi					
34.Sinifta Ingilizce kullanimina ayrilan zaman					
35.Alan derslerinin Ingilizce araciligiyla verilmesi					

Eklemek istediginiz yorum veya eleştiriler:

Ilgi ve katkilariniz için teşekkür ederim.

ALAN DERSLERININ YABANCI DILDE OGRETILMESI
KENT UNIVERSITESI, CANTERBURY

Sayin Ogretim Elemani,

Kent Universitesi, Canterbury, Uygulamali Dilbilim Bölümünde Türkiye'de özellikle üniversite düzeyinde alan derslerinin Ingilizce araciligiyla ögretilmesine ilişkin bir çalişma yürütmekteyim.

Bu anketin amaci Orta Dogu Teknik Universitesinde Ingilizce ile egitim uygulamasinin bugünkü durumunu degerlendirmek ve ögretim elemanlarinin bu uygulamaya ilişkin düşünce ve tutumlarini saptamaktir.

Anket yalnizca tarafimdan veri incelemesi amaciyla kullanilacagindan ankete verdiginiz yanitlar gizli tutulacaktir.

Incelemenin tamamlanmasi ve yetkili makamlara gerekli önerilerin iletilmesinde çok yararli olacagina inandigim katkilariniz icin çok teşekkür ederim.

Zuhal AKUNAL

ALAN DERSLERININ YABANCI DILDE OGRETILMESI:
ARASTIRMA PROJESI
KENT UNIVERSITESI, CANTERBURY

OGRETIM ELEMANI ANKETI

1. Cinsiyet: [ ] Kadin [ ] Erkek

2. Yaş:

3. Verdiginiz bölüm dersinin kodu ve adi:

4. Girdiginiz sinif/lar:

5. Sinif/Siniflarinizdaki ortalama ögrenci sayisi:

6. Kaç yildir ögretim elemanisiniz?

7. Kaç yildir bu üniversitede ögretim elemanisiniz?

8. Sahip oldugunuz derece/ler:
   [ ] Yüksek lisans   [ ] Doktora

9. Ingilizce anadiliniz mi?

   [ ] Evet   [ ] Hayir

10. Ingilizce kullaniminizi nasil degerlendiriyorsunuz?

[ ] a) anadili akiciligi ve dogrulugunda kullaniyorum

[ ] b) akici ve güvenli yalniz zaman zaman küçük hatalar yapabiliyorum

[ ] c) biraz paslandim, ama bir parça pratikle yeniden akici bir
       Ingilizcem olabilir

[ ] d) alt düzeydeki siniflarda daha yeterliyim

[ ] e) Başka (lütfen açiklayiniz):

11. Alan derslerini Ingilizceye ögretmeye başlamadan önce herhangi bir özel kurs yada

seminere katildiniz mi?

[ ] Evet   [ ] Hayir

INGILIZCE ILE EGITIM KONUSUNDAKI TUTUMUNUZ

Lütfen aşagida verilen her bir tümce hakkindaki *düşüncenizi ilgili yeri X ile isaretliyerek* yanitlayiniz.

12. Bu ögretim sistemi içinde tüm ögrenciler iyi Ingilizce ögrenmelidir.

a [ ]kesinlikle   b [ ]yanliş   c [ ]emin degilim   d [ ]dogru   e [ ]kesinlikle
yanliş   olabilir   olabilir   dogru

13. Bu üniversitede alan derslerini ve dil derslerini veren ögretim elemanlari arasinda iyi bir işbirligi ve dayanişma vardir.

a [ ]kesinlikle   b [ ]yanliş   c [ ]emin degilim   d [ ]dogru   e [ ]kesinlikle
yanliş   olabilir   olabilir   dogru

14. Ikinci bir dilin egitim dili olarak kullanilmasi ögrencilerin genel olarak yaraticilik düzeylerini arttirmaktadir.

a [ ]kesinlikle   b [ ]yanliş   c [ ]emin degilim   d [ ]dogru   e [ ]kesinlikle
yanliş   olabilir   olabilir   dogru

15. Ikinci bir dil yoluyla ögrenmek zorunda olmak ögrencilerin kendilerine olan güvenlerini olumsuz yönde etkilemektedir.

a [ ]kesinlikle   b [ ]yanliş   c [ ]emin degilim   d [ ]dogru   e [ ]kesinlikle
yanliş   olabilir   olabilir   dogru

16. Ikinci bir dil yoluyla yapilan egitim ögretmenlikten aldigim zevki azalttmaktadir.

a [ ]kesinlikle   b [ ]yanliş   c [ ]emin degilim   d [ ]dogru   e [ ]kesinlikle
yanliş   olabilir   olabilir   dogru

17. Su anda verdiginiz dersin yüzde kaçi gerçekten Ingilizce yapiliyor?

[ ]0 - 19% [ ]20 - 39% [ ]40 - 59% [ ]60 - 79% [ ]80 - 100%

18. Yukaridaki soruda ilk üç seçenekten birini işaretlediyseniz, lutfen asagidakilerden hangilerinin dersinizin tamaminin Ingilizce yapilmasini engellemede etkili oldugunu belirtiniz. (Secenekleri önem sirasina göre 1'den (en önemli) 5'e (en önemsiz) kadar numaralandiriniz.)

[ ] Dersteki ögrenci sayisi
[ ] O günkü yorgunluk dereceniz
[ ] Ingilizce kullanmada kendime olan güven derecem
[ ] Dersi tamamen Ingilizce yaptigimda ögrencilerin tepkisi
[ ] Ogrencilerin Ingilizce düzeylerinin dersi izlemede yeterli olmayisi

19. Sizce, baska hangi nedenler ögretim elemani ve ögrencilerin sinifta surekli Ingilizce kullanmasini etkileyebilir? (Lütfen açiklayiniz.)

20. Sizce, ögretilen konu alaninin Ingilizce araciligiyla ögretilmesi ögrencilerin bu dilde gelişmelerini olumlu veya olumsuz etkilemekte midir? (Lütfen açiklayiniz.)

21. Ogretiminizde, Ingilizce düzeyi düşük ögrencilerin dersi anlama ve derse katilmalarini saglamak için özel bir çaba gösteriyor musunuz?

[ ] Hayir
[ ] Evet (Lütfen çabalarinizi aciklayiniz.)

22. Alaniniza özgü terimlerin ögretiminde ve ögrenci hatalarini düzeltmede hangi yola başvuruyorsunuz? (Lütfen açiklayiniz.)

23. Sinifinizda grup çalişmasi, ikili çalişma gibi etkinliklere yer veriyor musunuz?

[ ] Hayir
[ ] Evet (Nasil? Ne zaman? Bu etkinlikler ikinci dilde mi yapiliyor?
    Açiklayiniz.)

24. Ogretiminizde kullandiginiz kaynaklari siralayiniz ve Ingilizce/Türkçe oldugunu belirtiniz.

Eklemek istediginiz yorum veya eleştiriler:

Ilgi ve katkilariniz için teşekkür ederim.

APPENDIX C

TRANSCRIPTION CONVENTIONS

1. T: teacher speaking or lecturing to students

2. S: student speaking

3. Ss: several or all students speaking simultaneously

4. Pauses are indicated in brackets:
   - (.) indicates a pause of a second or shorter;
   - (.3.) indicates a pause of 3 second, etc.

5. xxx is used to indicate speech that could not be deciphered.

6. ... indicates that the speaker did not complete an utterance
   i.e. that his/her speech 'tailed off'.

7. [=] indicates translation

8. A limited amount of contextual information is given, where
   appropriate in brackets.

APPENDIX D

LESSON TRANSCRIPTS

LESSON 1

T: First I would like to apologize for the inconvenience since Dr. Gorun is unable to to attend for an interview. We are going to hold these lectures together and unfortunately today's lectures are going to make some sort of overlap for both of the sections since Dr. Gorun's section know already about (xxx) etc. And perhaps they do not know my funny discussions about the properties of equilibrium solution. So I want to apologize for this kind of inconvenience, that is to say, that would be a good degree overlap in today's lecture, especially in the first half.

T: Now, you can remember that our discussion so far was conducted on the basis of a partial equilibrium approach. That is to say, we try to isolate a market or a commodity market, try to explain the demand for a supply of a specific good or (xxx) and then try to consider what kind of changes may happen if you introduce the change in, say, price of the factor or the price commodity under consideration. Here, you have to come into conclusion that you are not entirely justified taking all other variables as given since in the current economic life everything is influenced by some other variables. Therefore, you have to consider how these different pieces, and how these different bits and pieces come together to form the whole, that is to say, how factor and product markets simultaneously come into an equilibrium position. Now this is the object of general equilibrium analysis. The general equilibrium analysis dates to 19, sorry, 1850s perhaps, and perhaps the first and rather rudimentary analysis of a general equilibrium analysis can be found in Marxist writings about his conception of (xxx) investigate what could be the necessary and sufficient conditions for simultaneously equilibrium to exist in two sectors. Students who will take ECON 361 next year will extensively review this rudimentary form of general equilibrium analysis. Perhaps it was (xxx) who extensively studied the general equilibrium analysis and its existence (xxx) proves using highly sophisticated mathematics awaited Arrow in 1954 and Debrew at the same time. Arrow and Debrew in 1954 proved the existence of general equilibrium in competitive markets where the factor of production are (xxx) and there is no (xxx) scale.

T: Now later on the efforts were directed to obtain cases which are less restrictive than those of Arrow and Debrew. So, in 1971, this time Arrow and Hann tried to bring another proof to the existence of general equilibrium solution and they showed that again under the under the case of (xxx) factor inputs but this time with limited increase. So degree of monopolistic competitions general equilibrium solution still exits, still exists. Obviously, the solution provided by Arrow and Hann also is restrictive in some sense, in the sense that requires so as to say well behaved production and demand factors. That's to say, production functions exhibit good properties about marginal products and malfunctions for commodity demands are also valid. Now, we are not entirely satisfied in saying that OK, a general equilibrium situation exists and well, we do not wonder about how that can be obtained. But this is not the end of the story since you have to discuss two things other than existence. Now, you have, as we said earlier, to discuss the existence, secondly, you have to discuss the stability of equilibrium if it exists, if it exists, and the uniqueness of the equilibrium should also be investigated. Now let's try to demonstrate this by means of references to our simple supply and demand analysis. Let's suppose that we have quantity here and price there. These are, now, our demand and supply curves yielding an an equilibrium position at PE and QE. Does equilibrium exist? Yes, the answer is yes. Is it stable and unique? It is unique in this case since you have a downward sloping curve and upward sloping curve yielding a unique equilibrium position. Now, equilibrium exists, it is unique and it is also stable. You can easily understand the reason why. Suppose that price is higher than Pe at P1. What will happen? You have excess supply in the market and you know from ECON 101 that if there is excess supply in the market, prices are be down. Conversely, if the price is occasionally at P2 there will be an excess demand in commodity market and buyers will be tempted to beat the prices up. Therefore, if you have excess supply here, the unsatisfied sellers will be tempted to take prices down and here unsatisfied buyers will be tempted to beat prices up. So the equilibrium is stable as well as existent and following case. Suppose that you have an upward sloping demand curve as in the case of (xxx). Then, suppose that you have a supply curve. Doe an equilibrium position exist? The answer is yes. There is an equilibrium position at Pe, Qe. But is it unique? The answer is also yes since these two curves intersect at one point. So equilibrium position is unique. Now could you say anything about the stability? So it is unlikely that the equilibrium position to be stable since if the price is at P1 there will be unsatisfied buyers still eager to buy some commodity and they will persistently try to beat prices up. Here, if you are at P2 there will be excess supply in the commodity market and the producers in view of excess the supply will bring prices further down. So, instead of reaching to an equilibrium position at point E, you are away from this position. If the price is accidentally greater than or less than equilibrium position. So, the equilibrium position is existent, it is unique but it is unstable. So, it exists, it is unique but it is unstable. Now, in the analysis of factor supplies, you are also very familiar with backward bending supply curves, so suppose that you have an S here and a D here, this is the price and quantity. What do you have? Equilibrium exists, but it is not unique. It is not

unique and its stability should also be examined. Well, if you are here, if you are trying to reach the equilibrium position E1, can you attend an equilibrium position? The answer is yes since you have excess supply for prices above Pe1 so therefore the prices will be down. If you are at, say, P1 and in latter case, for example, if you are at P2, there will be demand beating prices up. So in this case you can clearly see that if you are somewhere in the labour(xxx) equilibrium position E1, then you have a stable equilibrium position. There are forces which you should review to the position E1. But you cannot say the same thing for position E2 since here if you are below P2 then you have excess supply which will make producers to bring prices down. And if the prices are higher than P2 then unsatisfied buyers will tend to take prices up. So you have a non-unique position as far as equilibrium position is concerned. There are multiple equilibrium and as far as the stability is concerned, stability should also be discussed and in E1 you have stable equilibrium and in E2 you have an unstable equilibrium. Now what about this situation? Suppose that you have demand curve and a supply curve of following (xxx). Here, let's suppose that this is Q and suppose that this is S and this is P. What can you say about such a situation? Now, an equilibrium position does not exist. So, here you can say that you did not discuss after all the stability and uniqueness properties of equilibrium position since it does not exist. So here, an equilibrium situation is non-existent. Now, this cursory examination will then show us that what is important is not entirely the existence of an equilibrium position. What is important in this context is also the uniqueness and stability of equilibrium. In an exactly similar fashion, a general equilibrium situation could be existent, unique and stable. So the efforts of the writers since Arrow and Debrew in 1954 are not directed only trying to prove the existence but also trying to find the conditions under which the general equilibrium is stable and unique. Now, (xxx) you can perhaps try to relate the existence, uniqueness and stability to the excess demand for a given commodity. If you show excess demand by the difference between quantity demanded at a given price

S: Hocam, cikabilirmiyim? (Asking for permission to go out)

T: (teacher nods and goes on) you can then say that excess demand at PE is equal to zero, it is positive if prices are less than Pe. So if you have an excess demand curve of this kind, here in positive excess demand here and excess supply there you will have an equilibrium position which is unique and stable at the same time. How does the latter situation look like? Put Ed here put P1 here try to show the excess demand curve here. You know Pe. What do you have? You have excess supply and for the price greater than Pe you have excess demand. So, if your excess demand curve is not downward sloping but upward sloping you have a unique but an unstable equilibrium position. Now let' take this third case, the case of multiple equilibrium here at Pe1 and Pe2 you have different situations. You have excess demand that is positive excess demand for the prices below Pe1 you have negative excess demand and later you have positive excess demand here.

So, if positive excess demand curve is just having a positive and negative slop in this region, so you have multiple equilibrium position and you have perhaps more than two equilibrium positions as I have described here. Now what about the non-existent equilibrium position? Here, if you put Ed here and if you put price there you have only excess supply and you have an excess demand curve for the following (xxx). So what you have is only excess supply not excess demand after all. So these are going to represent the equilibrium situations. And if you have a downward sloping excess demand curve crossing the Y axis, you will have a unique and stable equilibrium. Here, if you have a positively sloped excess demand curve crossing the vertical axis at Pe, you have a unique equilibrium but the equilibrium is unstable. Here, you have multiple equilibrium where the excess demand curve is bending back and fro here, you have multiple solutions and the excess demand curve does not cut the multiple solutions vertical axis you do not have a solution after all. The solution is not existent. So the moral of the story is that you have to consider not only the existence of equilibrium positions, you have to inquire the stability and uniqueness of it as well. So we have note that the efforts of the research workers in this field were directed not only finding the existence but also trying to show under which conditions the existent equilibrium is unique and stable. Now, let's come to the (xxx) which we have discussed in some detail, that is to say, how we can how can we try to give an idea of a general equilibrium analysis in a nut shell. This can be very easily performed within a 2 by 2 by 2 model. Here you have to consider two commodities, two factors, and two consumers. Now, as we did earlier, we will show the commodities by the letters capital X and Y. For the sake of simplicity, we assume two factors capital and labour shown as K, L and we have two consumers A and B. Now, let us try to find out what are the numbers of variables we have to find. You can then try to take into consideration that first you have to find demand for commodities X and Y, for consumers A and B. Further, what do you need? You need to first the factors supplied by individual consumers. These are factor supplies. Secondly ...

Ss: (they make a correction in chorus)

T: Excellent. Thank you for your attention. Now, let's consider the demand for factors, so you have to consider the demand from capital for producing X, you have to find demand for labour producing X, you have to find Y for capital for producing Y and demand for labour for producing Y. Further, you have to find what is the total amount of X and Y supplied by industries producing X and Y. Further you have to find Px and Py, that is to say, prices of goods. Further we need to add two more things, yes?

Ss: The price of factors

T: Yes, you have to find W and I. Now let us indulge into a value (xxx) you have four plus four plus and two plus two, altogether making 18 variables to solve. Now the

problem is whether there is sufficient amount of relationships out of which you can solve these variables. Let's try to imagine what sort of relationships we can write. First, we can write four demand relationships, for consumers A and B and for goods X and Y. So, you have to write four demand relationships for commodities. For commodity demands you can write that demand for commodity X is a function of the price of X, price of Y, and money incomes. OK? Where does the money income come from?

Ss: (Silence and murmur from students)

T : Well, money income is generated by the employment of factor services. So, if you have capital supply by A and labour supply by A and if W and R is obtained otherwise you then can obtain money income of consumer A and therefore, you can write four demand relationships. You can specify them very easily. Secondly, you can consider four supply of factors functions. Now, you have supply for capital A, supply for capital B, supply of labour by A and by B. Now, you are well accustomed to the (xxx) factors, you can simply say that supply of factors by individuals are simply a function of factor prices. Now, thirdly, you can write four demand functions for factors. Now, you have demand for capital for industry X for industry Y, demand for X and Y, labour for industry X and industry Y. And you are again well accustomed with the factor demands and you can clearly specify the factor demands as a function of the factor (xxx). Now, further you can then consider two supply functions for commodities. So, you can write supply of X and the price of commodity. Similarly, you can write two supply functions. You can then simply close up the relationships such that commodity markets will be clear. Commodity is demanded will be equalled to the commodity supplied and factor demands should be matched with the available factor supply. So you can write four market (xxx) relations, (xxx) for the factors and products. So you have four demand relationships here. Four supply relationships there. You have four relationships here supply of X and Y gives you two more relationships. For the market clearing you have to write two relationships for goods X and Y, goods X and Y, two more relationships, relationships, two more relationships factor K and F. So altogether it seems that you are going to have 18 relationships altogether. This similarly correct but you can well know from mathematics 104 and 101 that writing (xxx) equal number of relationships with the equal number of variables will not be sufficient to solve. A solution may or may not exist. Here, it turns out to be that you can solve all these relationships subject to what is called a numeraire, that is to say, a unit of measurement. You are trying to obtain price and factor price combinations (xxx) not in absolute values but in relative terms. In other words, you cannot calculate Px, Py, W and R. You can only calculate Py over Px, W over Px. (END of cassette)

T: (xxx) solve these relationships not in absolute price terms but in relative price terms. It is a matter of good taste whether you are taking Px as a numeraire or taking Py or (xxx) as a numeraire. It depends. But the point is that you cannot solve all these variables out of

relationships. And relationships are solved subject to a (xxx) which is taken to be as a yardstick as a numeraire. Now, this will bring us to a position where we can try to find some properties properties for the general equilibrium situation. Here in the following we shall try to show that three static properties observed in a general equilibrium situation for two by two model. Here, three static properties are observed. now, what are these properties? May I just clean this place? Fine.

T: Now, the third property which - anything wrong? well, properties to be satisfied in general equilibrium analysis are the following: the first is efficiency in factor substitution. what does that mean? well, in other terms, it means an efficient allocation of resources. Now if allocation of resources among other alternative uses is efficient, then we can say that the satisfied efficiency in factor substitution. Precisely speaking, this will amount to saying that marginal rate of substitution between factors are the same across this axis. now the second property which has to be satisfied in a general equilibrium solution for competitive markets is efficiency in distribution of commodities. In other terms, it is efficient distribution of the same commodities between consumers. I am not using the term among since we still working with two by two by two model, so we have two consumers. Now the third property to be satisfied is efficiency in product- mix, efficiency in the product-mix which is (xxx) supposed to say that you have a combination of products which is economically efficient. So, efficiency in factor substitution, efficiency in distribution of commodities and efficiency in the product-mix together make a set of conditions which are necessary to be satisfied if the economy is working in (xxx) situations. You are accustomed with the name of parato when we discussed economic efficiency in ECON 101. And parataoptimal allocation and distribution of resources would require three things to be satisfied. First, efficiency in factor substitution, second, efficiency in distribution of commodities, and thirdly, efficiency in product-mix or efficiency in bringing an efficient combination of products at (xxx).

T: Now, let's try to understand what sort of a bargaining procedure will look like. consider the small (xxx) to the blue (xxx) here. This is supposed to be representative of relative price of labour for the production of X. What is the relative factor price for the production of Y? So the slope of the tangant here is W over R in the production of Y. Now what does that mean? in industry X, labour is cheaper or dearer, yes? ... So in industry X, labour is cheap and capital is dear.

T: You can remember that the slope of X (xxx) is termed marginal rate of substitution in producing X and it should be identical with marginal rate of substitution in producing Y. Thus, firms being profit maximizers in all instances will eventually equate these marginal rate of substitution to W over R. Hence, efficiency in factor substitution would require the following relationships to be satisfied. Let's have a ten minutes and we shall continue later on.

LESSON 2

T: I would like to sum up what we did last time because some of you were not here and we were only few. and may I just make a review, a very short review to refresh your memories about the things that we talked about our mass-spectography.

T: now, we talked about gasstopography plus (xxx) conveniently subdivided into two like the (xxx) and we know the difference between. We know the difference in solid materials. Allright? And we know that in A the absorbtion takes place at the surface of (xxx) material. In other one absorbtion takes place on the surface of the (xxx). And we know that the carrier gass has got little properties (xxx) and we have different carrier gases for different uses. For instance if you want to make a very quick analysis and if you (xxx) column efficiency is not important at all, what sort of carrier gas do you use?

T: The light carrier gas will be our difference. Whereas if the time of the analysis is not so important, but the column efficiency is important in that case what we are using will be a heavy carrier gas. So we know which type of carrier gases are heavy and which ones are light carrier gases. so whatever is the proper one, we are going to use it. So is for folly materials of the columns that means we have got different materials for columns (xxx) that are suitable for different materials for different components to be separated. Now, as before we discussed (xxx). I think I am going to mention once more that the supermethod for the separation will be the gass-spectrography whereas the best method for identification is the mass-spectrography or mass-spectrometer, mass-spectrometer in short.

T: Now, this is the best method for identification whereas the best method for separation is still remains to be the gass-spectrography. If you remember I have already gave a homework about the detectors of gass-topography that we are (xxx) and during the last week we discussed the detectors. That will be your homework and perhaps the students who would like to give a lecture will prepare one of them or all of them and will complete and lecture on those topics. Allright? and I have already given you a problem about gass-topography.... that is one more thing and the reason for (xxx) base line (xxx)

T: The reasons for these will also be discussed. Allright? These are the main things to be discussed during the next weeks. So try to be ready for those. Now as far as the temperature of the column and the temperature of detector goes, I think we discussed something that the detector temperature should be higher and lower than the column?

Ss: Higher

T: Higher than the column temperature. and you can heat your system up with a

temperature programming of course. First of all, (xxx) and then time adjustment that means perhaps (xxx) second or (xxx) two seconds. OK? Are there any questions concerning gass-topography at the moment any other topography systems?... I want to proceed spectroscopy which is going to be the best method for identification. We are in this identification depending upon molecular weight components. Now as far as the instrumentation goes, I am not going to give the details which we are not concerned about. I think this will be the main detail that I will present at the moment for you. Now massspectrometer when you have a look inside consist of an ionization area. This part is the ionization area which means the sample molecules which are introduced in your instrument are ionized in that area. OK? Are ionized. Now one micrometer or less delved in the ionization area, that is injected in your instrument just as you are injecting it in your gass -topography that is injected in (xxx) and goes through the ionization area. Now what happens here is the problem. In the ionization area, you have got an anode and katode. The katode is the tungsten fillament as we drew to produce a cloud of electrons for you. when the tungsten fillament is heated up and produces a cloud of electrons, these electrons which are negatively charged will be running towards anode, will be running towards positive charge. now as the electrons are flowing between katode and anode, your sample molecules are just injected in and there will be a collusion between the sample molecules and electrons. As a result of this collusion, the ionization will take place. This area is the ionization area. Now, at the end of this collusion both positively charged and negatively charged ions will be produced. However, the ratio of the positively charged ions to the negatively charged ones will be one thousand to one. That means the positively charged ions are dominant. And our analysis will be based upon positively charged ions. So once more, what happens sample (xxx) one micrometer or less is leaking through and allright? As the molecules leaking through, the flow of electrons take place between anode and katode, the collusion and ionization. And as the positively and negatively charged ions are produced here, as I said before, the amount of negatively charged ions will be eliminated here before the ions enter the separatory part. This is the separatory part of the mass-spectrometer. Now you shouldn't misunderstand it. The separatory part is sometimes misleading in the way that it is not a separation of negatively and positively charged ions. No. The positively and negatively charged ions are separated from one another before they enter the seperatory part. This is something else. The negatively charged ions are eliminated from your system. So you are led to a (xxx) only your positively charged ions. And these positively charged ions enter the separator, leave the separator. in the separator positively charged ions will be sorted out according to their masses.. according to their masses. That is what is happening in the separatory part. So, ionization then elimination of negatively charged ions from positively charged ones, the positively charged ions are accelerated by these accelerating plates and just enter the separator. We have different types of separators, single focusing separator, double focusing separator... I will mention later on. Now I do not want to talk on these special different separators but in general what's happening in the separatory part. That is

important. Now you've got your positively charged ions and you want to separate those and to identify them. Now the identification is to achieve, depending upon the m over e ratio of the ions, m over e ratio. That means mass to charge ratio. Although scientifically speaking, the identification is based upon the m over e ratio, we can say that roughly speaking, the identification is based upon masses as most of the ions has a unit charge we may just ignore e as we have got a unit charge. We may say that the identification is on the different masses. OK? Now how can we achieve an identification depending upon different masses? Now the thing is that the velocities of the ions which are accelerated through the separatory part are (xxx) portion (xxx). If I've got from different ions with the masses and m1 and m2 and m3 and m4 where m

T: What is the matter Safak? (addressing one of the students)

S: (No answer)

T: is greater than m2 and the smallest m4 where the velocities will be V4, (xxx) the highest velocity, V3, V2 and V1. Is it all right? That is the masses are (xxx) This means what? This means the lightest ion will reach the collector first. This is your collector and these are your exit slits and the ions through through exit slits will reach the collector. The lightest ion will reach the collector first and the heaviest ion will reach the collector last. That's it. So depending upon their masses, the ions will reach the collector one by one. If you remember we once mentioned having a mass-spectrometer coupled with a gass-monotography. I said first separation taking place in gass-spectrography then the sample entering the mass-spectrometer is a very convenient way of analysis provided that we can take necessary proportions to eliminate the carrier gass from your system. Do you remember that? Because we have all advantage of having the separation first and then identification in the spectrometer and the spectra of spectrometer will be much better and much clearer. However, we are highly disadvantaged of carrying all the carrier gas to the mass-spectrometer which may cause a confliction on the (xxx) but if we could use semi(xxx) so that we can just eliminate the carrier gass before. Your sample enters the mass-spectrometer, I think that would be more suitable. And in fact the one we have got has got a gass-tomography in front of them. Now as far as the identification is concerned, we have to make use of the natural abundance of substances which we will discuss later on, the natural abundance because you have got different materials giving exactly the same molecular weight. So how can you distinguish them? The main idea is to determine molecular weight then identify them. However, there are quite a number of substances, molecules having the same molecular weight. How can you identify them? By using the natural abundances, by using the isotops. For instance for carbon, we have carbon 12, carbon 14 OK? And the whole thing is based upon this knowledge. How much of the carbon 12 is of carbon 13 and carbon 14? Allright? How much of the material X has got X+1, X+2. ... We have got all this knowledge. Once we have got this knowledge in the

literature, then we have got your spectra in our hand. You can just make comparison and decide what molecule you are having. Suppose, we have got molecules A,B,C,D, having exactly the same molecular weight, 99, 108. You can just using, by using the natural abundance determine the correct molecular weight. I think in a very near future, we will solve a problem about. Now I think we should focus our attention on the instrument and try to understand the ionization area, where we have got the anode, tungsten fillament and katode, the molecules of the sample, accelerating and the vacuum, all right? Because the whole system operates in a vacuum. Then the separatory part. These are the ion beams and the exit slit, then the collector, then amplifier recorder, then (xxx) which we are not very much concerned about at the moment. Now what sort of a detector do you think e have in the mass-spectrometer? ... Now, the most popular detector is the electro-multiplier, electron... multiplier (writing on the blackboard). And, perhaps I may give you, ... now, perhaps you might few notes about the operation, OK? Now, the operation of a mass-spectrometer, number 1, a micro-mall or less of the sample is volatilized, (dictation) a micro-mall or less of the sample is volatilized, and allowed to leak slowly nto the ionization area... If the sample to be analyzed has an appreciable (xxx) of pressure, if the sample to be analyzed has an appreciable (xxx) of pressure, it is allowed to enter the instrument, ... to enter the instrument by diffusion, ... to a tiny orofis, as you see on the picture called a leak, that is your sample leak. Now, if it is non-volatile, if the sample you are going to analyze is non-volatile, a portion must be converted to the vapour state ... to the vapor state ... by an electric ark or by a spark, by an electric ark or by a spark. Well, by laser means it can happen you see. Now once the molecules enter the ionization area, what did we say about it? Please, anyone of you remembering? Yes, Meltem, what did we say? Once the sample molecules enter the ionization area, now the molecules of the samples are ionized, OK?. This is number two step. The molecules of the sample are ionized by a stream of electrons flooding from the heated fillament toward the anode, all right? Flooding between the heated fillament toward the anode. Both positively and negatively charged ions are produced. The positively charged ions predominated as I said before. Now, the step number 3 will be the positively charged ions are separated from the negative ions by the small negative potential at A. Then the positively charged ions are accelerated towards where? by a potential through the separator. Now, in the separator, what is happening in the separator? The fast moving particles, the fast moving particles are subjected to a stronger magnetic field,... to a stronger magnetic field. Mind you, sometimes this magnetic and electrostatic field for a double focusing separator (xxx). But we have got some double-focusing separators which are called (xxx). Although they are in fact have got high power, a very high separating power. Now, they are accelerated by a potential we said. And they are just subjected to a high magnetic field, OK? And they just follow a curved path, and they reach the eit slit ... and they reach the exit slit. And they are falling on the collector. Now, we know at what order do these ions fall on the collector. Now, as I said before, if you want to talk exactly, the ratio is mass to charge, mass to charge ratio. The ions are separated according to their mass to charge ratio. However,

thinking that mostly we have a unit charge on particles. We may just say that the particles are separating- separated according to their masses. This we can say. Now, now when ions are passing through the exit slit they fall on the collector. Actually, it is a collector electrote. The ion current is resulted and is amplified. And of course, this is recorded as a function of the filt strength and the accelerating potential. So we have got the result. Are there any questions so far? I think I should give you a homework question which you may have time next time perhaps. Saying that descibe the (xxx) the ions in terms of, in terms of what? The velocity of the ions, mass of the ions, the charge and the magnetic field strength, please. And the magnetic field strength. In fact you should note here that the path described by any given particle represents a balance between two forces. No, what are those forces? The first force is the centric pedal force, and the second one is the balancing centrifugal OK? The centripedal force and centrifugal force. We shall first write down those two forces and equate them and then take the temperature. You will see that the velocity of the particles important. Field curb is important, magnetic field strength important, so is the mass and the charge all right? And of course (xxx) also enters. And I think we are going to have a lecture on Monday. Monday is not a holiday. Monday afternoon we are going to have two lectures I hope. And we try to finish up our mass-spectrometer on Monday and the next week will be our last week I think. One after Monday will be our last week. Perhaps we should have pure discussions, OK? Now, have a look at yourt notes and see whether there is anything which you don't understand. Time is almost up.

LESSON 3

T: Now, let's assume that we have a single glass window and we have ... and have a double glass window. Two types of windows, one is single glass, the other is double glass. In (xxx) conditions (.60. teacher drawing figures on the board) now, we have two types of windows, four millimetres glass, single glass and double glass. Each one four millimetres ... again glass. Now, we are asked what is the rela- what should be relative humidity inside air ... in order to add surface conditions in this, on this glass, that means we will find relative humidity at the inside surface for the problem of single glass case and double glass case. They both are the same, indoor and outdoor conditions ... Now, let's assume that they have certain temperature twenty degree celsius outside air temperature minus seven degree and we will find what is the relative humidity at the outside air in order to have condensation on the surface of glass. How can we solve this problem?

Ss: (murmurs)

S: Hocam, bir daha soyleyebilirmisiniz?

T: OK, I will repeat it. The (xxx) conductivity of the glass is given. It is zero point seventy eight but I want to use one watt meter celsius. It is a different kind of glass. I have a solution here. So I will use it one per one metre celsius. So let's assume that thermal conductivity of glass is one watt per celsius. Now, the question is indoor air temperature twenty one degree celsius, now, it is twentyone degree celsius here and outside air temperature is minus seven degree celsius. We are asked in order to see condensation on the surface of the glass, what should be the inside air relative humidity? ... How can we solve this problem?

S: (Unidentified) carpi(xxx) oradan cikaririz. Yani dew pointten cikaririz. Oradan da ..

T: First, we find the surface temperature. Firstly, first of all, we find the surface temperature inside surface and outside surface temperature of the glass and then we will predict or we will learn inside air dew-point temperature. For, if you, if you see condensation on the surface of the glass, that means, inside surface temperature of the glass is equal to inside air dew-point temperature. So you can find surface temperature and then dry-bulb temperature at the inside surface should be less than or equal to dew-point temperature at the inside air in order to see condensation. If the inside surface temperature is less than or equal to the dew-point temperature at the indoor air then we will see condensation, this means we will see condensation (.7.) and after learning the value for the indoor air dew-point temperature you can see, you can learn the relative humidity at the inside air by using chart.

T: Now, let's find the surface temperatures at inside and outside the surfaces. Now this is surface one and this is surface two. You can draw the (.10.) you can draw the network, network for the single glass. (.34.) and then we will find for the glass (.26.) is now under thirtyone meter square ... now, let's find T1 and T2 to draw inside and outside surface temperatures are .... now, I didn't find outside air temperature, inside air temperature is enough for us. Four point eight is the inside surface temperature of the glass which is point one, we don't need ... We don't need to find out surface temperature inside surface because we will find the inside air relative humidity in order to see the condensation of the surface of the glass. Now we will take that T1 which is the inside surface temperature should be equal to the indoor air dew-point temperature in order to see the condensation. So, T1 four point eight must be equal to dew-point temperature inside. Can you find me the relative humidity for inside air? for this case? Four point eight our dew-point temperature, twentyone degree celsius is our dry-bulb temperature. Can you find me the relative humidity, approximately thirtytwo or thirty three degree celsius.

S: Hocam,

T: Now, you know that the question says that in order to see condensation in the inside

surface now this is our inside surface in order to see condensation insid surface, what should be the relative humidity. Twenty one degree celsius inside air temperature we don't know wet-bulb temperature at the inside air. We don't know these three. In order to predict this one relative humidity, we should know dew-point temperature and wet-bulb temperature. But the question says that in order to see condensation at the inside surface, this means that inside surface temperature should be equal to dew-point temperature at inside air in order to see condensation. So, we will find first of all, the inside temperature which is four point eight degree celsius and will say that this temperature is equal to dew-point temperature by using psychometric chart we will find relative humidity... Any questions? Now this problem says that (xxx) relative humidity at inside air under the conditions twentyone degree celsius which is approximately normal condition condensation on the surface of the glass thirtythree percent relative humidity which is very low in this room fifty percent relative humidity. Now, the temperature at the outside surface is minus seven degree celsius, again reasonable temperature for Ankara conditions. Now let's check or let's solve the same problem for double glass. Now we assume that if we have double glass window and then we will find the relative humidity at the inside air in order to see condensation on the surface of the glass. let's find again temperatures. do we need, now this is temperature one, this is temperature two, this is temperature three and temperature four. Do we need to find the temperature at each point here? In order to solve this problem, in order to solve this problem, the problem says that in order to see the condensation on the inside surface of the glass, what should be the indoor relative humidity. we need only to find T1 the others should not be, it is not necessary to find those temperatures because they are not important on the prediction of the relative humidity at the inside air. So we will find only T1 and at the inside surface

S : Hocam, aradaki boslugu, onemli degil mi?

T: Onemli tabii. Now the thickness between the glasses is approximately ten milimetre which is one centimetre. (.7.) Now for our glass, know inside air (xxx). What can you say about the resistance in between these two glasses, that means inside...

S: Zero seventeen.

T: zero seventeen, seventeen, where did you find zero seventeen? (no answer from the student). Kit is zero point forty metre square degree celsius. This is ten milimetre thickness between the glasses that means one centimetre for this zero point forty. Now, we will find the resistancy between these two points ... zero point three five seven ... over (.15.) Now by using the network we will find inside air surface temperature, inside surface temperature of the glass is eleven point four degree celsius. Now when you compare results the inside surface temperature here was four point eight degree celsius but here it is eleven point four degree celsius. The main difference, the important point here, double

glass have higher inside surface temperature decreases the condensation risk. Can you find relative humidity for these at the inside air, we assume that dew-point temperature at the inside air eleven point four degree celsius and what is the dry-bulb temperature. It was twentyone degree celsius. Can you find me relative humidity? (.10.) Now, in this previous case it was thirty two percent but now it is three percent. This shows the double glass case will decrease our condensation risk, double glass windows have, er, less condensation risk.... any questions? (.8.)

S: Hocam, (xxx)

T: Yani su camin arasinda condensation olmaz. aslinda, aslinda bu iki camin arasinda condensation olmaz dedigimiz zaman, er, cunku eger bunun icinde hava varsa, eger o hava da nemli hava ise, nem varsa, o zaman condensation mutlaka olur. Cunku havanin nemi mutlaka belli bir sicaklikta condense olacaktir. Hatta, hatta bu arada hava sicakligi duserse mutlaka, ama cift camlar imal edilirken aradaki hava kuru hava birakilir, yani nemli degildir. Onun icin condensation riski bu arada yoktur. Eger camin cercevesi catlaksa ve iceriye nemli hava girmisse o zaman condensation olur. Yoksa buradan transfer olan hava, orada condense olmaz, cunku buradan hava transfer olmaz.

T: Now, let's solve another problem (.42.). Now we have two which is twenty centimetre thickness concrete and one centimetre wood. We have wood panel inside surface of the wall... (55 sec) now we are given a wall which has one centimetre wood at the inside surface and twenty centimetre concrete wall. we are going to find, we will check if condensation will occur in this wall under given conditions, conditions are indoor air dry-bulb temperatur twenty degree celsius, relative humidity seventy percent, outside air wet- bulb temperature four minus four degree celsius and relative humidity eighty percent ... thermal conductivity and also for.. we know those. now, well, how can you start solving this problem? Can you, can you start to solve this problem?

Ss: zero temperature

T: First of all we will find dry-bulb temperature. Yes, we will find surface temperature but before we find surface temperature. We don't know dry-bulb temperature at the outside and then we will need again dew-point temperature at the inside. So we will find these values. Can you read inside air dew-point temperature for me?

Ss: Fourteen point six

T: Fourteen point six. can you read outside surface dry-bulb temperature?

S: eksi alti, eksi alti galiba

T: I have found it minus five degree celsius (students laugh). Maybe I am wrong I don't know and what is the dew-point temperature?

S: eksi alti

S: eksi alti

S: eksi alti. hocam?

S: eksi alti.

T: Minus or plus five degree celsius. OK, now, you will continue solving this problem here now we know inside air, sorry, inside air dry-bulb temperature and outside air dry-bulb temperature. We know by using dry-bulb temperature we will find temperature at the point one, point two, and point three. (.58.) now, between inside and outside airs is zero point thirtynine and then Q over A value ..(.12.)

S: hocam,

T: Now you can find temperature at point one, two, three by sing our (xxx). The results T1 is twelve point two celsius, T2 five point one, T3 minus two point three degree celsius. Now we will this is our true temperature at the... Now we will find dew- point temperature ... network... (.33.) Now, dew-point temperatures are fortyone degree celsius at the inside, inside surface and minus eight degree celsius at the outside surface. we will find only two dew-point temperature at point two. So, we will write the resistances here (.10.) now, we know our ... wood and concrete we will write resistance

S: Hocam niye?

T: Burda metre ile carptigimiz icin metre kup.

S: Hocam gram degerini yazmayacakmiyiz?

T: Farketmez, gm de olur gr de olur. Now we will find dew-point temperature at point two ... so dew-point at point two is forty point two degree celsius. So let's write it here, forty point two degree celsius. Now, we can make a table (.7.).

S: Hocam galiba o yanlis, eksi uc olacakti.

T: Hangisi?

S: Dry-bulb temperature, eksi bes eksi uc olmasi gerekir.

T: Eksi uc olamaz ki, dry-bulb eksi dort oldugu icin,... pardon eksi uc olacak.

S: Orada bir yanlislik var.

T: O zaman surayi biz degistiririz. Lutfen. I don't know the value you gave it from the chart.

S: Eksi uc hocam, eksi bes icin, icin

S: Eksi alti

S: Ama o zaman

T: Now, five point celsius at the outside air, let's prepare a table. Point one, point two, point three and ... (.59.) Now this is the table showing the dry-bulb temperature and dew-point temperature. These are degrees celsius ... Now we will draw temperature profile (.86.) dew-point ... temperature and one point shows dry-bulb temperature for the wall. now you can see that the dew-point temperature is greater than the dry-bulb temperature in the wall starting from the inside surface until to a point we don't know but we can measure it exactly by using graph papers, we use graph papers we draw this figure we can easily to which point will condensation occur in this wall. Sorry, yes, you are right..... now we can easily measure the thickness of condensation in this wall in this case (.13.) Now the reason for condensation in this wall is coming from the material at the inside surface. Now we have a wood panel at the inside surface which seems an insulation material. So you know that if insulation material is placed at the inside surface of the walls will increase condensation risk in the wall due to having low quantitative profile in the wall. So if this is not in but outside surface. But you cannot say that wood will be but we can use an insulation material, er, near to outside surface, then we would decrease our condensation risk. Now, we will solve another problem. We have, er, I have prepared a problem for you to see the difference between the case of insulation material at the inside, near inside and outside surface, the effect of condensation, the effect of insulation on the condensation. We will solve it. Let's have a ten minutes break. Then we will continue solving that problem.

LESSON 4

T: OK. I was telling you the structure of the regular or ordinary. OK. There were a couple of sections in it. First one was definition, second one data modification. what was the third one?

Ss: data selection card.

T: Data selection card. The fourth was procedure card and the fifth one was task definition. ... And last time we discussed data modification card. OK? Let's keep those cards again quickly. First one was compute, second one was recode, OK? as I told you last time, we use these cards to modify, transform, to recalculate new variables, OK? out of the ones that there are in your data set. Very functional, all of them. OK? we use all of them very frequently. So you'b better learn them, OK? I am going to give you a couple of assignments to master usage of these cards. Now let's talk little bit about the third subtitle which is data selection cards. ...the best known or the most frequently used one is selective. OK? In doing data analysis, we may face situations in which you are required to do analysis for certain sub-population of your data set. For example, you may be in a position to select only males, females etc. You may do the same kind kind of analysis for both groups or if you are dealing with the regions, let's say, regions in Turkey, and you have five regions. You can select regions by using selective cards. Or if you are dealing with the variables you can select certain response categories by using selective for instance education variable. EDUC 1,2,3, 6,let's say, 6 response categories. OK. If this is illiterate people, if you want to pick out only the illiterate then you can use selective card. OK? The form of the card is in parenthesis you should specify the condition. Let's say sex is equal to 1. OK. Selective. If I want to pick out only the illiterate people EDUC equal to 1 if 1 is illiterate. OK. Now, you can combine, you can do multiple selection out of the variables or groups. OK. Let's say we have also income variable. Let's say that variable has 7 categories. Now, if you want to pick out let's say this is college education, college and university educated people and this is the people, let's say between 3 million and 5 million ... and if you are in a position to select those people, you combine these two conditions under one state. OK? Selective, OK? Let's say EDUC equal to sex and income equal to 6 OK. With this card you selected those people with college or university education and those people have income between 3 million and 5 million Turkish Lira. It is a very handy and useful card. OK? We use that card very frequently. OK, now let's talk about fourth subtitle which is procedure card. (.22.) Now, this section you specify a procedure you want the computer handy for you. OK, now, in data analysis we use some statistical techniques, some bivariate and some multivariate and SPSS designed to handle all those types, different types of analyses for you. OK? like if you are doing univariate analysis you have in SPSS a procedure called descriptive. Again in SPSS there is a procedure called frequencies... which provide you with basic or descriptive statistics,

statistic-, like mean, median, mode, standard deviation, variance, standard error, maximum value in distribution, minimum value, skewness, so on and so forth. OK? And this procedure we draw you is something...if you want histogram of the distribution ... like you use how many people in each category that you have in your distribution. So by getting the histogram we can see the shape of the distribution ... When you decide how much you approximate the normal distribution ... OK. Something like...

S: Frequency?

T: Yes, frequency does that and you have already done that, I believe. Option A. What's the option A?

Ss: A.

T: A. Yes. If you specify option A when we deal with task definition cards, we will see. OK. Now, this is for univariate statistics. OK? For bivariate we have ... started, we have crosstabs which gives you the joint distribution of the two variables, ... breakdown gives you the mean of one variable into the categories of the second variable. Then you have of course coorelation ...Here, simple. Let's say one-way analysis of variance. You have simple regression ... here ... some other techniques that

S: Hocam bir sey soyleyebilirmiyim?

T: But these are the basic ones. What?

S: One-way?

T: These are one-way analysis of variance. These are one-way analysis of variance ... Also we have multivariate procedures which handle little more complicated problems ... OK. Here we have Anova, multiple regression ..., and techniques like canomical correlation factor analysis, discriminate analysis, cluster analysis, so on and so forth. These are the main... The list is very long for multivariate analysis. OK. What we do in procedure section, we name the procedure first. Let's do it, for example, let's ask frequencies of some variable ... let's say we have data. Let's define the data, variable list. 16th column, ID, V1, V2, V3, V4 ... That's disk. Numbers of cases unknown. Format... Let's say we have ID variable 3 columns and then a space ... V1 2 column variable and and space... V2, let's say, 4 column variable, let's F4,2 and let's say V3 variable and space and the last variable is one column variable. 1,0. OK, now let's say I would like to get frequencies of my variable except ID OK? What I put here these frequencies I say general ... you can do it without this phrase V1 to V4 ... we have two more convention here, if you have consecutive variables and sequential variables. OK. You can connect them by two that

means from V1 to V4.

S: Can you write from V1 to absence?

T: Absence? No, you can, alternatively, say V1, V2, V3, V4, either one.

S: ID to absence.

T: ID to absence? What is absence?

S: (incomprehensible answer)

T: That means frequency distribution for ID, which is meaningless. What you gonna do frequency distribution of ID variable?

S: We put ID to for example last variable.

T: OK. There is no need to get frequency distribution for this one.

S: Let's say I want only ...

T: Just say, general V2, put V2... Then you get the frequency distribution of V2 variable .... Now, your assignment, you were supposed to write a programme like this, a short programme and frequencies, procedure card. OK? name the variables except ID. How many variables we have, starting, let's say what was the first variable?

Ss: ID

T: No

Ss: Gender

T: Gender, OK. Now, if you name the variable gender or what was your last variable?

S: Absence.

T: Two absence.

Ss: We don't need ID.

T: No, no. If you get ID, that's OK. That's OK. But there is no information what are

gonna do with frequency distribution of ID variable? That's meaningless, numbers from 1 to 7. Each one can 1, give whatever you want. ... Now, while we are here, let's finish up procedure section because the task definition comp- completes OK. This section, procedure section, OK? This section has two different subsections, one is this section that I just told you, procedure section, the other one is task definition section. OK, now, in task definition section, we have 2 more cards. The first one is option and the second one statistics. OK? As the name implies, task definition cards define the task for you, OK. They are also related to output, OK? What you wanna see in output OK? How you wanna see them. How the computer presents that information to you, OK? There is two things you control OK. By reading these two cards, options and statistics, OK. let's find in SPSS book the options section of frequencies procedure and let's read through ... OK. Let's see what kind of things we can accomplish by options there .. OK. In the book 9 options are given to you. Ok. Let's see what option 1 does for us. (Teacher hands the book to one of the students to read aloud)

S: (reading from the book) Option 1 .. (incomprehensible)

T: OK. If we have missing values in your data set, which you should have in your assignment , now I am going to check, OK. Now, if we have missing value ... missing values we should specify which variable, or variables have missing values in the distribution. OK? Now, let's say you are collecting income information for the people. Some of them already gave their income. Some people said 'don't know' or no answer. They refused to answer you OK? So for those people you either use the code 0 OK/ which means non-applicable, don't know or refused to answer, whatever. Or we use 9 for these type of responses OK?

S: 0 or 9.

T: 0 or 9. OK. In the data set that I gave you, zero is used for missing values OK? For missing information. Now, let's say if this is one column variable this becomes 0 and 9, if it is two-column variable you get 00,99. If the variable is, if the variable is three-column variable you may 00, three zeros or 3 nines. OK? Whatever. You have to specify this information OK? in your programme. Let's say, I am just making up, V1 variable, V1 variable has a missing value, coded, let's say 0, what kind of variable that was, that is the zero, zero.I specified for V variable OK? the missing values. OK? Let's say our V2 variable also has a missing value OK? Then let's say that's coded 9. So, V2 variable then ... 4 digit, 9,9,9,9 OK? Let's say our V4 variable, V4 variable has also missing, also missing value. Let's say V4 ... F1 .. indicated by 9, I should put here 9. So if I do this, by doing this, I led the computer that Ok there is one information, when the computer hits 0,0,9,9 for this variable, that means that there is no information is visible there OK? unknown, not applicable.

S: Variablelarda missing cases yada missing valuelari belirtirken, bir variableda sifir sifir kullanip digerinde nine nine kullanmak

T: It is not a very good way. If I were you I would be consistent. If I can make .... missing values 9, I use 9 throughout all variables OK? So it is not a good idea in one variable to use 0 for a missin value, in other, next variable 9... it confuses people. It is better to choose one of them and be consistent.

S: Yani, formati doldururken mi oyle belirtiyoruz... F degerlerini mi

T: No, that ... I looked at that F because that gives me width of the variable OK? So,(xxx) variable if you are using 9 for the missing value, your code for missing value becomes 9. This format variable 9,9 for F2 variable and 9,9,9 for F3 variable, so on and so forth. So, you gonna give the missing values looking at, by looking at the width variable OK? That's why I looked at those format values. OK? So, the first one, first option says that Ok, if you specify option 1, the machine, the programme says I am going to ignore missing value indicators, OK? So, the machine, the computer disregards your missing value specification, it doesn't see them. So, what it does, instead of values, whenever the machine sees missing values it (xxx) the mean value. OK, what's the second option?

S: (xxx) value labels for different distribution (incomprehensible)

T: OK. I have shown you the value labels. OK. But for each value there are value labels, we define our variable, OK? We write little ... I mean definition, if you want age of the respondent or sex of the respondent, whatever. So, if specify option 2 you won't see those things on your output. OK. What's option 3?

S: (reading)

T: (xxx) by 11, by 11 inch. So this is not a regular paper size, OK. It should be larger than this, everything in the size of paper. So, we are controlling the output size. OK. What's option 4?

S: (reading) (incomprehensible)

T: As I told you in the beginning, there are a couple of things you can do for your output. You can either print it through a printer OK? bring it to your screen, check it on the screen or write everything on the disk for later use. OK. You don't have to print it right away. OK. You say ... you don't have time to do so but you want the job done. What you do, you run the job OK, save it on the disk, come back a couple of hours later and bring it up and check through if there isn't, I mean, if there isn't anything wrong in your output,

just get it printed, OK? So you can do those three things. Here the option 4 gives you opportunity send your output to disk (xxx) OK, not to print it but to disk to be saved, So, sending it to the disk, you save it there for later use, some other time you come, bring it up and get it printed. ... When you say print and you give the name, it can be printed. It is a very good way to do ... to do the assignments actually. OK. Don't get it printed right away. See either bring it on the screen, OK, or save it on the disk, check it on disk because when you are doing it on screen, you don't have enough time because it scrolls very fast. You can't catch it. but if you save it on disk and read it up later on, you'll have much time. So, it gives you much opportunity to ... So, option 4 does that for you. OK? What is 5, option 5?

S: (reading aloud)

T: This is printing all the variables in condensed paper. So, it gives you a shorter output. It is also handy to do the long job, larger jobs OK? What's the...?

S: (reading aloud)

T: Ok, now, that option, let's say, you have variable, let's say, income variable. Sometimes the values response categories are too many OK. Usually like one page is not enough to hold all the values OK? extends to second page. So, in that case the machine (xxx) value gives you one page output income variable .... no matter how long it is, its length normally ... normally let's say it takes two pages to print out the variable income variables, but if you specify option 7, you get it, you get income in one page. Ok. It is also a good option to use very handy. What's 8?

S: Option 7

T: OK. Option 7

S: (incomprehensible reading aloud)

T: OK. Now, as you know we have the output, that option where this is? ... OK, now, as you see here this is the output for one variable ... OK where does it start? ... This is ID. This is the frequency distribution for ID variable, now these are the codes. The machine uses codes first, up to 70 then histogram comes OK? After histogram you find statistics, descriptive statistics. OK. Now, this option 7 gives you the opportunity how to get this (xxx) OK. If you say, I don't, I don't have to see this part, OK. Now, What is option 8?

S: (reading aloud, incomprehensible)

T: OK, now, this is the histogram (Laughters). Find the histogram here. OK. This is a histogram. Nice one. You can specify option 8 on your job. You set histogram. Now, what is option 9?

S: (reading aloud, incomprehensible)

T: Option gives you index at the end of job OK? You find .... (end of cassette 1). ... You can , some people use mean and for interval, you can look at mean, median, and mode for ratio, these variable, you can look also everything. All statistics are applicable. OK, so here ... just because of this part of the assignment, problem was, I mean, you're supposed to write a couple of frequencies OK? one for nominal level variables, OK? One for ordinal level variables, one for ratio level variable, OK? Now, how you ganna do it ? Let's do it here. Let's say, gender is nominal, which is nominal OK. Options... You want the frequencies, I mean, histogram which is option 8. I don't know the number for... what's ... OK, now, in frequencies procedure, procedure card, let's say, we have 8 statistics available to you ... Those are given by numbers. It is enough for you just to specify the number on your programme. OK. You don't have to write mean, mode, standard deviation. 1 is gonna give the mean, the second standard error, OK? ... Third one median, ... the fourth is mode ... the fifth standard deviation, sixth is variance,... seventh process, eighth ... skewness, nine is range, ten is minimum and twelve is maximum. OK? For this variable which is gender the only appropriate one is 4, mode, so you put here 4. Let's say, you have some ordinal variables. For these you have to write another frequencies card. s

S: Hocam, 7'yi okurmusunuz?

T: What? Kurtosis. (spelling) k-u-r-t-o-s-i-s. OK. Now, ... again you have to say general ... Let's say the name of the ordinal variable is, I am just making up A,B,C, ... OK? For options, again you want to get histogram which is 8, for this OK, there is, let's say give the median, 3 and 4 ... You have to do the same thing for interval and ratio level. So, you can combine these two. These things apply both of them. You can combine all the interval and ratio level variable in the third frequencies card.

S: Mesela, diyelim ki 10 tane variable var. Sadece iki tanesini yazabilirmiyiz?

T: Any two, let's say V1 another variable. So, you have to write another set of frequencies card like tis for interval and ratio level variable. And you, have done the job. Good. Now is this clear to anyone? Do you have any questions about the procedure and task definition card? ... (17 sec).

S: Hocam, istatistige S4 yazdigimiz zaman medianlarini okur mu?

T: Yeah, yeah. OK. Mean, whatever, one. If you write 1 you get mean. Those are mean. Those are the numbers, whatever. if you're gonna get men by 1, you wanna get mode, write 4, if you want variate, write 6, there. If you want skewness write 8 and whatever you want. Give the number. ... Any question about this?

S: Tum variablar icin mi median, mode hesaplayacak, yoksa alttakileri P9 lari gordugu icin mi?

T: How would the machine know which variable ... You are the one to decide. That's why you're doing one section for nominal level variables. You know it how the machine will know that OK? one for ordinal level variable, one for interval and ratio level variable. You have three sections. So this section is for nominal level variable. So, you specify right here OK? Whatever is required. For ordinal level variables you know what statisticals go with that level. So you specify them here. You're gonna write another set frequencies just lik this one will be interval and ratio level variable OK? And you know what's good for those, for that level variables. You specify (xxx) card here. So the machine cannot decide which is ordinal, which is nominal ...OK? Whatever you want, OK. Any questions?

S: Hocam, arasina nokta mi virgul mu koyuyoruz?

T: That's comma. That's rule OK? Either use I told you comma or leave blank OK? That' the rule. I can either put commas there or leave a blank. So, that's true for every case in SPSS. That's called delimiter. One is comma, one is space ... OK, now by this, we finish up the introductory part of SPSS. OK. Now, there are certain things which are used to make your output look nicer, OK, like variable names, value labels, those kind of things, look at those things OK? Now, for your output, let me see, OK, now, let's look at this output... For example, she said, ID, ethnic group, gender, income ... These are self-explanatory but sometimes OK, use conventional ... conventional (xxx) variable E1, E2 and no one knows what's E1 E2 except you OK? So if you use variable names for example give little names for each V convention, age of respondent, income of the respondent whatever. Age of the father, sex of the .... so on and so forth, OK. So, these are (xxx) names are given (xxx). There is a proper way to do it. But there is no need. These are self- explanatory. There is no need to write labels. In some cases you need to do that. Let's see how we gonna do it, OK, to make the output little nicer. OK. Let's get an example from the book. (.57.) OK. There is one here. Why don't you (asking one of the students to go to the blackboard and solve the problem), quick! A couple of them.(.43.) These are variable labels. OK. There is a variable, what is it? Zero, zero, one which is code definition for that ... deviation (.16.) The second one I see that ... that is card number... OK. Third one median school year ... (.32.). Slash here. OK. You should separate them by using slash, each one should be separated ... (20 sec.) OK. That's

enough for variable labels ... Now here we define response categories, first you define your variables then give labels for your response categories ... (.114.) Get the short one...(.28.)

S: 2 alti olacak galiba.

T: (addressing the student at the blackboard) Why don't you, why don't you write variable labels and for our data set. Quick OK. Thank you. Now there is an example from the book. Now, variable first one. You define, you name for your variable OK. In second one which is value labels we give names to your response categories of your variable. ... First part is variable labels or value labels. ... ID stands for identification number. That's the name of the variable ... slash, there is slash OK. Right under, that's the 16th column, first,OK. Variable name, for explanation, ethnic group of the respondent OK, slash, don't forget the slash... slash ... (71 sec.) what are thos? Do you know what they are? Those must be different dimensions of job classification. You don't know the name?

S: No.

T: What dimension they are .. OK. ... Ok. That's enough now. Write couple of value labels ...Just like that, OK. There is no need to write value labels for ID variable. You can start with the second variable. Now, you should try value that should be ... just like this. OK. 16th column.

S: I don't know, no ID.

T: There is no need to write value label for ...

S: I will write under the numbers.

T: Yes, there is no need. Start with the second variable, ethnic group. First, name of the variable, just like here ... That's the name of the variable ... OK. In parenthesis one. That's first category, first response category that you have. What is it? What ethnic group is that?

S: One.

T: One, one? It says some place there.

S: They say white.

T: Put white there. ... Where is the handout? ... It is here. White is the first one, second

one is Asian, West Indian, African ...

S: (Still at the blackboard) I write what?

T: OK. Just white.

S: And that's enough?

T: Yeah. That's enough. Two in parenthesis. Go ahead, OK.

S: In here?

T: No, white is enough. That's the name of category. Second category, black ... Asian OK. Now put slash there. Second variable gender .. Third variable income ... What kind of variable?

S: Numbers, five digits numbers.

T: Is there a need to write value labels?

S: No.

T: For interval level variable we don't do it.

S: I won't write income.

T: No, there is no need to write what kind of variable. If you do recording then you can define high income, low income .

T: Age interval, years work?

S: Interval

T: What's ...

S: Interval

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