Possible Effects of Bilinguality on Additional Language Proficiency and the Academic Achievement of EFL Learners

Findings from Iran

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ABSTRACT

The present research examines the possible effects of bilinguality on additional language proficiency and the academic achievement of Iranian EFL learners.

This study is a longitudinal survey of 98 EFL learners in the English Language Department of Urmia University in Azerbaijan, Iran, during the 2002-2004 academic years. It compares 56 Turkish-Persian bilinguals with 42 Persian monolinguals in terms of their performance on the FCE language proficiency tests, i.e. listening comprehension, reading comprehension, writing proficiency, and speaking proficiency in three phases of data collection. The two groups were also compared with regard to their academic achievements based on their grades consulted in every phase of the study. The subjects, who fell within the age range of 18-24 years, were similar in terms of individual (e.g. linguistic background), social (socio-economic status), psychological (motivation orientations), and educational (previous exposure to other languages) orientations.
Analysis of the data submitted to a series of independent t-tests indicated that bilinguals performed significantly better than monolinguals in all measures of language proficiency except for writing skill. Further analysis of the data revealed that bilinguals attained higher levels of academic achievement. The findings, therefore, appear to provide support for the argument that bilinguality may be a good predictor of success in learning additional languages, English in this case.

The findings are discussed in relation to the Threshold Hypothesis (Cummins, 1976) that assumes a minimum threshold level of competence to be attained by a bilingual in his two languages to benefit from his bilinguality; and the Interdependence Hypothesis (Cummins, 1979) that posits positive cross-lingual transfer of cognitive/academic skills between the languages one knows. In other words, through evaluating the four basic language skills separately, the researcher provides evidence that: a) the findings are within the framework of these two fundamental hypotheses in research on bilingualism, and b) knowledge of two languages may not exert the same effect on every language skill as far as additional language learning is involved. This is more evident from the key findings related to the fourth hypothesis, i.e. a lack of significant difference between the two groups in terms of their writing proficiency; a finding which encourages new avenues of enquiry for those interested in issues related to bilingualism and additional language learning.

An outstanding feature of this study is that it expands research into a rarely investigated cohort, namely, adult non-balanced bilinguals. Furthermore, it explores bilinguality and its possible effects on learning of English as a foreign language among EFL learners from a part of the world where there has been minimal empirical research. It brings evidence
from a new sociolinguistic context with a different combination of languages (i.e. Turkish, Persian and English). The findings of the present investigation also bring a new perspectives on how bilinguality as an important learner variable affects additional language learning. The outcomes may make significant contributions to help the individuals of either language background (i.e. Turkish, Persian) to achieve gains in additional language learning.
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<td>AACH</td>
<td>Academic achievement</td>
</tr>
<tr>
<td>AACH (1, 2, 3)</td>
<td>Academic achievement in phases 1-3</td>
</tr>
<tr>
<td>B</td>
<td>Bilingual</td>
</tr>
<tr>
<td>BA</td>
<td>Bachelors Degree</td>
</tr>
<tr>
<td>BICS</td>
<td>Basic Interpersonal Communication Skills</td>
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<td>BIQ</td>
<td>Background Information Questionnaire</td>
</tr>
<tr>
<td>CALP</td>
<td>Cognitive and Academic Language Proficiency</td>
</tr>
<tr>
<td>CCSSO</td>
<td>Council of Chief State School Officers, United States</td>
</tr>
<tr>
<td>CPAT</td>
<td>Controlled Productive Ability Vocabulary Test</td>
</tr>
<tr>
<td>DMM</td>
<td>Dynamic Model of Multilingualism</td>
</tr>
<tr>
<td>EFL</td>
<td>English as a Foreign Language</td>
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<tr>
<td>ELD</td>
<td>English Language Department</td>
</tr>
<tr>
<td>EMM</td>
<td>Enhanced Multilingual Monitor</td>
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<tr>
<td>FCE</td>
<td>First Certificate in English</td>
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<tr>
<td>GPA</td>
<td>Grade Point Average</td>
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<tr>
<td>H</td>
<td>High variety in diglossic situations</td>
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<tr>
<td>L</td>
<td>Low variety in diglossic situations</td>
</tr>
<tr>
<td>L1</td>
<td>First Language</td>
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<td>L2</td>
<td>Second Language</td>
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<td>L3</td>
<td>Third Language</td>
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<td>LBS</td>
<td>Linguistic Background Scales</td>
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<td>LCP</td>
<td>Listening comprehension proficiency</td>
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<tr>
<td>LCP (1, 2, 3)</td>
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LP
Language proficiency including scores on reading, writing, listening, and speaking

M
Monolingual

M (int)
Integrative motivation

M (ins)
Instrumental motivation

M (total)
Overall motivation

NA
Non applicable

RCP
Reading comprehension proficiency

RCP (1,2,3)
Reading comprehension proficiency in phases 1-3

SES
Socio-economic status

SLA
Second Language Acquisition

SP
Speaking proficiency

SP (1,2,3)
Speaking proficiency in phases 1-3

SPSS
Statistical Package for Social Sciences

TAACH
Total academic achievement

TLA
Third Language Acquisition

TLP
Total language proficiency excluding speaking

TLP (1,2,3)
Total language proficiency in phases 1-3

UCLES
University of Cambridge Local Examination Syndicate

WP
Writing proficiency

WP (1,2,3)
Writing proficiency in phases 1-3
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Definition of Key Terms

Academic Achievement

Academic achievement of the EFL students in this context represents their educational success assessed through their portfolio, which contains all their scores in the core-courses as well as the English language-related courses. The students’ Grade Point Average (GPA) at the end of every semester is referred to as the main criterion to get to higher levels.

Dependent Variables

The dependent variables that the researcher is trying to predict include additional language proficiency in English as a foreign language and Academic achievement of the Iranian EFL learners.

Expert/Experienced Learners

Experienced Learners are those who have already managed to learn a language other than their first language. It is assumed that the learners with previous language learning experiences have some enhanced abilities that help them when they commence learning an additional language (e.g. a third language).

First Language

This is used to refer to the first/native language a subject acquires generally in the family (mother, father, grandparents) and continues to use it.
Foreign Language

English Language that is not usually used in the social environment of Iran is considered a foreign language as opposed to the second language (e.g. Persian in the bilingual regions like Azerbaijan) that is widely used in the environment.

Independent Variables

There were some important independent variables that might have influenced the research outcomes, i.e. language proficiency and academic achievement measures. These included the learners’ age, gender, SES, linguistic background, motivation, and previous exposure to English language.

Inexperienced / Novice Learners

These two terms refer to learners who start acquiring/learning an additional language, either a second or a foreign language, for the first time.

Monolingual

Refers to those individuals who have neither sufficient receptive nor productive abilities in a language other than their first language. They may be familiar with a few words or general expressions in another language; they should be considered monolingual unless they are able to use languages other than their first language in actual communication actively.

Motivation

Throughout the study, ‘motivation’ is used as a general term to refer to motivation orientations (i.e. integrative and instrumental motivation).
Second language

The term ‘second language’ refers to learning a language other than the first language in terms of order (e.g. L1, L2, L3, L4...Ln). However, it may be learned in a foreign context or the immediate environment of the individual.

Third language

In terms of order, refers to the language which is learned or being learned after the first and second languages.

Total Language Proficiency

The subjects’ performance scores in all the test papers, except for those of speaking, were added to construct their total language proficiency. The rationale for excluding the speaking scores was that only 20 subjects were interviewed, while, the remaining 78 lacked scores on oral production tests. Statistically speaking, this would affect the measures of central tendency and variability. Therefore, it seemed sensible to exclude the speaking scores from the analysis as far as obtaining significant results were concerned.

Total Motivation

This term refers to the sum of the subjects’ scores related to integrative and instrumental motivation that is used only for additional analysis. It does not mean motivation in its real meaning that requires a series of comprehensive questions on the elements of motivation that was beyond the scope of this study.
Azeri Turkish

Azeri Turkish language, also called Azeri, Azari, or Azerbaijani Turkish, is a Turkic descendent of the Altaic Language Family. This language is the first language of the Azeri Turkish/ Persian bilingual subjects in this study.
CHAPTER ONE

INTRODUCTION

1.1 Background

Additional language learning is a complex process that may be influenced by a variety of individual, social and psychological factors. One of the key issues that may lead to a diversified range of findings in research on additional language learning is the learner variable. Altman and Vaughan (1980), Ellis (1994), Klein (1995), and Kormi-Nouri, Moniri, & Nelson (2003) maintain that among the plethora of individual learner variables, special attention should be given to the role played by the learners’ previous experiences with language learning. This is due to the fact that the linguistic background of learners has been identified to interact with learners’ strategies and cognitive processing in language learning. Therefore, this aspect of learner variables needs to be systematically evaluated in research on additional language learning in order to provide reasonable justifications for research findings.

Language learners may be different in terms of the linguistic systems they already possess. Individuals with a variety of linguistic systems at their disposal may undertake learning additional language/s. Some may have learned only one language prior to acquiring/learning another language, while, others may have more than one language system in their repertoire. These two groups of people are generally referred to as monolinguals and bilinguals, respectively. This aspect of the learner’s profile has been reflected in the extensive literature on studies on bilingualism that as De Bot (2000: 420) says, “increased dramatically in the 1980s”.

1
Research on bilingual matters is wide-ranging and covers a variety of important factors (e.g., third language learning, cognitive operations, neurolinguistic aspects of language learning, etc.). In recent decades, interest in the phenomenon of bilingualism and additional language learning among researchers and educationalists has continued to grow (Cummins, 1993). For several years, bilinguals as compared with their monolingual peers have been examined in various aspects, including additional language proficiency development, academic achievement, language learning strategies, and cognitive operations related to language learning. Prior to the 1960s researchers were primarily concerned with the cognitive and academic performances of bilingual subjects as judged against those of monolinguals. The consequence of these studies was that the findings generally portrayed bilinguality as a handicap (for more details see Saer (1923) and Darcy (1953).) These studies, which have been strongly criticised in terms of methodological approach (e.g. socio-economic status of subjects, language of testing, proficiency levels of subjects), advocated the view that bilinguals suffered from academic retardation, had a lower IQ and were socially maladjusted as compared with monolinguals. However, studies on bilingualism have, remarkably, shown a pattern of positive views since a revolutionary study was conducted by Peal and Lambert in 1962. (A detailed discussion on Peal and Lambert’s study is provided in Chapter 2.)

Although there have been a few studies reporting no differences between these two groups, the popular belief that under certain circumstances bilinguals may be better language learners than monolinguals has been supported both by research on linguistic and cognitive outcomes of bilinguality (Lambert, 1981), and by studies on third language acquisition (Cenoz, 2003).
Scholars have accounted for various factors and several hypotheses on the possible effects of bilinguality on language learning. Some of these suggestions that are directly connected to learning additional languages - English as a foreign language in this study - and on most occasions include:

- **The Threshold Hypothesis:**
  
  "There may be a threshold level of L2 competence which pupils must attain in order to avoid cognitive disadvantages and allow potentially beneficial aspects of becoming bilingual" (Cummins, 1976: 23).

- **The Interdependence Hypothesis:**
  
  "To the extent that instruction in Lx is effective in promoting proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in school or environment) and adequate motivation to learn Ly" (Cummins, 1991a: 77).

- **Contextual factors:** The relative statuses of languages in the society and social factors have a major impact on additional language learning but probably do not influence it directly (Lambert, 1981; Sanz, 2000; Errasti, 2003).

- **Psycholinguistic factors:** These refer to the learners’ states of mind and the strategies they undertake to efficiently check, monitor and evaluate their learning (Ringbom, 1987; Cook, 1992).

- **The Dynamic Model of Multilingualism:**
  
  "The language system of a multiple language speaker is not merely the result of adding two or more language systems but a complex dynamic system with its own parameters not to be found in monolinguals" (Herdina & Jessner 2002: 17).
These hypotheses, explained in detail in Chapter 2, have mostly been used as explanations for the findings on the issues related to bilinguality and additional language learning, although a few research studies have produced counterevidence to some of these notions. Obviously, then, more investigation on some of these claims regarding the phenomenon of bilingualism and bilinguality, particularly its specific influences on third language learning, is necessary.

In addition, most studies on the possible effects of bilinguality on additional language learning as Cenoz (2003:81) states, “relate the advantages presented by bilinguals to the influence of bilingualism on cognitive development (e.g. concept formation, creativity) and specifically to metalinguistic awareness”1. The main hypothesis in these studies is that cognitive advantages occur as a consequence of the bilingual experience (Cummins, 1976; Verhoeven & Vermeer, 1992; Kormi-nouri, et.al 2003). In other words, it is believed that knowing language(s) other than an L1 extends rather than reduces the individual’s cognitive capabilities, which, in turn, confers benefits rather than create problems. The assumption is that a person who knows two languages has access to situations and experiences that are not available to a monolingual person.

Apart from the belief that bilinguals are better language learners, many scholars including Ringbom (1987), Sanz (2000), Hoffmann (2001), Errasti (2003), Keshavarz & Astaneh (2004), and Nor-Azmi (2004) have positively associated bilinguality with foreign language achievement. Their main proposition is that bilinguality leads to the development of advanced skills and learning strategies that seem to speed up foreign language learning processes. Gibson, Hufeisen & Libben (2001) believe that the added sources of

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1 Baker (1993: 122) defines metalinguistic awareness as the ability to think about and reflect upon the nature and the functions of language.
knowledge give the third language (L3) learner a foreign language learning edge that is not available to someone who is learning a language other than his first language for the first time. These experiences and potentials apparently distinguish L3 learners from first time learners of a foreign language. These propositions require further explorations and confirmation emerging from reliable research on the matter in various contexts.

1.2 Rationale of the Study

Research on bilingualism and third language acquisition/learning is a rather young area within linguistics, which has been gaining interest over the recent years. It is reflected in a number of publications that involve different aspects of this phenomenon (Cenoz & Valencia, 1994; Clyne, 1997; Cenoz & Jessner, 2000). What is especially noteworthy is the fact that studies on bilinguality and its possible effects on third language learning have been undertaken predominantly on children. In only very rare cases adult learners are observed in terms of the values and benefits that a previous experience of knowing two languages may bring to them. Among the many unexplored areas of research in bilinguality and L3 learning, the need for expanding bilingualism research to adolescents and adults has been underlined. It is thought possible that older learners have some cognitive experiences lacking in children, and appear to have some fundamental advantages (Hoffmann, 1991; Edwards, 1994). Therefore, further research is needed to find out whether this advantage remains with the bilingual in his adulthood or even through his life.

In addition, bilinguals have been described and assessed in terms of the fluency and balance they have in their two languages and the real bilingual has long been one who is equally and fully fluent in two languages i.e. balanced bilinguals (a problematic category
of bilingualism which is explained in detail in Chapter 2). All the others (in fact the vast majority of those who use two languages in their everyday lives) are not really seen as bilingual or special types of bilinguals (Grosjean, 1982). Therefore, sufficient and carefully designed long-term studies of the effects of various types of bilinguality on the acquisition/learning of a foreign language— as many scholars like Baker and Jones (1998) and Galambos & Goldin-Meadow (1990) recommend—need to be carried out. This will provide insights into whether any possible advantages occur among bilinguals with various degrees of bilinguality.

Furthermore, one of the most important aspects of research on bilingual matters is the social context in which it is carried out. This possibly arises from the well-known statements on the close relationship between language and society. Ellis (1994) posits that a collection of social factors is likely to influence learning outcomes and that social factors have a major impact on developing proficiency in additional language/s. It should be noted that studies on the association between bilingualism and language learning have been performed in diverse social contexts. Obviously, every context has its own unique peculiarities (Cummins, 1976) that will lead to different educational as well as methodological outcomes. An overview of research studies in various social contexts reflects the fact that educational aspects related to additional language learning have been given emphasis more than sociolinguistic factors. However, apart from education, there are other external sociolinguistic factors (e.g. the knowledge, use and valorization of the two languages, geographical distribution and the number of the speakers of that language, etc.), that are believed to mediate the effects of bilinguality on additional language learning (Cenoz, 1999; Baker, 2001). Such bilingual societies where external sociolinguistic factors may play an important role in communicative interactions definitely need further research. It would be of particular interest to find out the extent to
which the type of bilinguality emerging from such natural contexts where general knowledge of L1 is gained through the use of language in communication settings is related to success in third language learning. This study provides further evidence from a different sociolinguistic and educational setting, i.e. Northwest Azerbaijan in Iran, a bilingual region where social and cultural factors may play a substantial role in the development of language proficiency in additional languages. The results of such a study would be of particular interest to those who want to find out whether studies of bilinguals who have both acquired and learned their languages in such contexts corroborate findings reported so far. An understanding of the context in which this investigation has been carried out is essential. The characteristics of the context in which the bilinguals find themselves provide information about the ways in which the two languages form part of the person’s life. A brief description is therefore provided as far as the scope of this study in concerned.

### 1.3 Context of the Study

The Islamic Republic of Iran is one of the multilingual countries where several languages co-exist. It has a population equal to 66,622,704 (July 2002 est.). Persian is the official language spoken by 58 percent of the population in most central and North-eastern cities. There are other languages of ethnic minority groups that have their own publications and broadcast programmes including Turkic and Turkic dialects mostly Azeri Turkish 26% (for more information about the Azeri Turkish Language see definition of key terms page xxii), Kurdish 9%, Luri 2%, Balochi 1%, Arabic 1%, Turkish 1%, and other languages 2%, (http://www.lexisnexis.com). Figure 1.1 represents the population distribution according to the ethnolinguistic groups in the country.

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1 The information is obtained from CIA World Facts online book (http://www.lexisnexis.com) prepared by the Central Intelligence Agency for the use of US Government officials.
Figure 1.1 Distribution of Population According to Ethnolinguistic Identities


Peoples of Iran

Ethnolinguistic Groups

Groups in Iran

ALTAIC FAMILY
Turkic
- Turkmen
- Chagatai
- Other

HAMITO-SEMITIC FAMILY
Semitic
- Arab

Groups Only in Surrounding Countries
ALTAIC FAMILY
Turkic
- Uyghur

INDO-EUROPEAN FAMILY
Iranian
- Chahar Aimak

CAUCASIAN FAMILY
- Adygas-Arbuls (Azerbaijan)

Armenian
- Armenian

Other
- Iranian

Spanish inhabited or uninhabited areas are shown in white.
Persian is the medium of instruction in schools all over the country. Children take their education in Persian since they enter school at the age of 5. The education system consists of 1 year of pre-primary, 5 years of primary, 3 years of lower secondary (Guidance school), 3 years of upper secondary (high school) and one year of pre-university education. Students undergo periodic examinations and evaluation every year to determine promotion to the next grade. At the end of grade 5 a province-wide examination is administered determining promotion to secondary schooling. Teaching English as a foreign language starts from the second grade at guidance school for 3 hours a week. Similarly, teaching the basic grammar of the Arabic language starts in the first grade of the guidance cycle. It should be underlined that both English as an international language of communication and Arabic as the language of the Holy Quran experience a lack of systematic and methodological approach at Iranian schools. These two subjects are taught in Persian, because students are not proficient enough to be instructed in these languages. There is a lack of interest among the students mostly because they are unaware of the main objectives and benefits of learning these subjects. The weak classrooms (e.g. unqualified teachers, lack of authentic materials as well as audiovisual equipment, limited hours of instruction), no opportunities for informal learning in natural settings, and lack of native speakers can be pointed out as some of the factors that contribute to the lack of success in developing proficiency among the students at school. They often fail to develop language ability in either of these languages and forget them soon after they graduate from school.

In the bilingual regions, children take their formal education in Persian regardless of their ethnic origins, religious affiliation, or the language(s) they speak at home. Nevertheless, they use their first language (other than Persian) in their own regions. Azerbaijan, a vast
area in the North-west of Iran, is one of the bilingual regions where Azeri Turkish, a Turkic descendant of the Altaic Language Family, is used as the main vehicle of communication. Except for education, Azeri Turkish is used as the common language in most settings. It is the language of civic administration, the media, and cultural and religious occasions. People acquire this language informally through having contact with authentic language in the family and the natural environment that surrounds them. However, they do not have the opportunity to develop literacy skills in Azeri Turkish language through formal education. Although, Persian is typically learned in educational settings, people have contact with it in unofficial settings, too. Otherwise stated, in addition to learning Persian formally, individuals acquire it through meaningful interactions in the informal settings of their environment.

To summarise the status of each language in this bilingual setting in terms of the processes involved in language learning, one can consider: a) Azeri Turkish acquired through individuals’ meaningful interactions with the language in natural communications both in the family and the society, b) Persian both acquired and learned through individuals’ contact with the language un-officially in natural settings and formally in the school settings, respectively, and c) English, as a foreign language which is learned only in the official settings either at school or the universities, while students have no opportunities to acquire this language in natural settings.

Therefore, in this context individuals by virtue of having prolonged contact with two languages since their childhood gain functional language ability\(^3\) in the two languages and

\(^3\) Functional language ability is used to describe one who operates in two languages with or without full fluency for the task in hand. In other words, one who understands, speaks and possibly writes in two or more languages. Emphasis is placed upon what the speaker has to do with his language in the society in which he lives.
move in and out of the monolingual and bilingual language modes depending on various situations.

In such a context, thus, the bilinguals’ bilinguality is a fact of daily life where the first language, Azeri Turkish, is acquired from childhood in the family, environment, and community naturally along with the second language, Persian, as the national language and language of schooling. Grosjean (1982) refers to the type of bilinguality existent in Azerbaijan and some other bilingual regions in Iran as ‘child bilingualism’. He explains this situation as follows:

One of the main factors in child bilingualism is of course school, unless the linguistic group to which the child belongs has its own schools or has public education conducted in his own language. This is the case for countless majority groups throughout the world like Kurds in Iran.

(Grosjean, 1982:171)

Nonetheless, in Azerbaijan the heritage language (Azeri Turkish) is in danger of being replaced by the L2 (Persian), which will naturally lead to a decrease in the functions of the Azeri Turkish language and eventually Azeri Turkish language shift. In recent years, based on the author’s own experience, there has been a tendency among parents towards raising their children monolingual in Persian. Most parents of bilingual children claim that they see it wise for their children to speak only Persian. Their reasoning is that they consider child bilinguality as having an adverse effect on their children’s intellectual and social development. Therefore, for parents being monolingual in Persian seems to be crucial for children in their social, educational, and psychological well-being. Perhaps the parents’ assumption is that to be exposed to the second language in the early stages as much as possible and to make a special effort to put children in situations that require
Persian, preferably on a daily basis, may help their children develop adequately enough in the language of schooling, Persian. This will eventually be beneficial for them not to experience any failure in terms of academic development at early stages of learning through a second language when the first language may be of little help. In addition, there is an impression amongst the parents that their children may be confused with two languages and some problems like stuttering and a late start of speaking may arise from learning to speak two languages from birth.

Another possible reason is that some parents may tend to reject their ethnicity and the language it is linked to. They may view the dominant language of the nation superior to the others. Accordingly, they wish to raise their children in the language they want to identify with or speak. Whereas, recent literature as already mentioned, proposes different views on cognitive and linguistic effects of bilinguality even in the long run. For example, in some cases child bilingualism has been found to have a positive effect on adult aptitude for learning a foreign language (Eisenstein, 1980) and creating a greater facility in picking up a third language in future (Magiste, 1984).

A few research studies (e.g. Keshavarz & Astaneh, 2004) seem to question the important factor of bilinguality and its possible linguistic or cognitive effects on learning processes in the bilingual regions in Iran. According to Modarressi (2001), bilingualism and multilingualism are among the major issues of Iranian socio-linguistics that need scientific consideration. It is obvious, then, that there is a special need for research on the phenomenon of bilingualism in the multilingual setting of Iran.
1.4 The Main Objectives

This investigation was an opportunity for the researcher to evaluate some of the arguments concerning advantages or disadvantages of bilingualism. Also, it helped to some extent, to recognise the specific circumstances under which its effects, either negative or positive, occur. Considering the multi-dimensionality\(^4\) of the phenomenon of bilingualism, one needs to be precise about the most important aspects that require scientific considerations with respect to the specific needs of the society. Among the wide-ranging areas of research on bilingualism, one can point to the lack of longitudinal studies of adult bilingual EFL learners who learn English as a foreign language. This seems to be a rich area of enquiry considering the fact that bilingualism is becoming increasingly important on account of continuing migration and globalisation (Clyne, 2004).

The present study is, therefore, designed to explore the influence of bilinguality on the learning of English as a Foreign Language with evidence from Iran. Thus, one can find out whether knowing two languages enhances a learner’s learning of a third language. A best possible way to understand such an effect is to see how EFL learners attain general language proficiency in foreign languages. Nevertheless, it is not evident whether knowledge of two languages exercises the same effect on every language skill. Therefore, it is obvious that research is needed, as Hoffmann & Cenoz (2003) agree, in order to isolate the specific influence of bilinguality on third language general proficiency and on different language skills. The reason for separating these skills, i.e. productive from receptive modalities/ oral from writing skills is that they appear to be affected differently by the degree of bilinguality individuals possess (Diaz, 1985; Ringbom, 1987; Mackey,

\(^4\) Bilingualism is an interdisciplinary phenomenon. Lambert (2000) maintains that it touches many other fields of study, from neurology to politics and sociology.
2002). In addition, this will assist the researcher in explaining the findings within the framework of two fundamental hypotheses in bilingualism, namely, the Threshold Hypothesis and the Interdependence Hypothesis (Cummins, 1976, 1979) through which a distinction is made between Basic Interpersonal Communication Skills (BICS) and Cognitive and Academic Language Proficiency (CALP) (these two aspects of language proficiency are discussed in Chapter 2).

It was hoped that the bilinguals' and monolinguals' performances on various tests of language proficiency would bring about new perspectives on how bilinguality as an important learner variable, affects additional language learning. Understanding the possible distinctions between these two groups may make significant contributions to additional language learning in Iran in many ways. For example:

- It will make us aware of how bilinguality can affect development and achievement in L3 proficiency;
- It will enable parents, teachers, and EFL authorities to use this awareness to help the individuals of either language background to achieve gains in additional language learning; and,
- it will encourage further lines of research into the role of bilinguality in additional language learning.

1.5 The Structure of the Thesis

In addition to the present introductory chapter, that establishes the background, the rationale of the study, and finally the main objectives, the thesis is organized to present the related materials in four other chapters.
Chapter two is developed in three main sections. The first section presents several basic definitions and typologies of the phenomenon of bilingualism both at individual and societal levels. An attempt is made to include those definitions and categorizations that are within the scope of this study. In the second section, various aspects of theory, concerning bilingual development and its possible linguistic and cognitive effects on language learning, are discussed. This section provides summaries of several research studies carried out in various bilingual contexts. In the third section the investigator synthesizes the chapter through proposing a general view on bilinguality. This chapter ends with an outline of some of the shortcomings prevalent among most of the research studies and establishes the general framework of the investigation.

Chapter Three encompasses a detailed description of the methodological approach adopted in this investigation. The research questions and hypotheses, subjects’ profiles, measurement tools, procedures, and data analyses pursued in data collection including the three main phases of investigation, are fully described.

The fourth chapter is the main body of the research, which is devoted to testing the hypotheses through analyses of the findings and answering research questions using the appropriate tests. All the hypotheses are presented individually and the corresponding results are summarised and displayed through tables and graphs. The main focus of the analyses in this chapter is on the most important independent variable, i.e. the language backgrounds of the subjects (either monolingual or bilingual) and its effect on the dependent variables, i.e. language proficiency and academic achievement throughout the analysis. There are also other research findings on the relationship between the subjects’ motivational orientation, socio-economic status, gender and the dependent variables.
These independent variables are not the primary concern of the study, but are pointed out to support the main findings. This chapter provides an opportunity for the investigator to present an overview of the study in an attempt to integrate the findings of the study with those of other studies. In order to keep this thesis as coherent and readable as possible, the most relevant information is included in the main text and secondary information is presented in the appendices.

Conclusions and recommendations are synthesized in a final chapter. It contains a summary of the main findings from the main body of research. The principal implications of the study are recapitulated and finally the chapter concludes by putting forward some suggestions concerning future extensions of the present work.
CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

The introductory chapter established the background, rationale and main objectives of the study. The present chapter is an extensive review of literature on bilingualism and related issues as far as additional language learning is concerned. It begins with an outline of the conceptual framework including various terminologies and typologies of bilingualism and bilinguality. The review, then, moves on to the second section, which deals with the basic theoretical aspects pertaining to bilingualism. Various hypotheses proposed in the field that have been considered as the fundamental bricks to the research on bilingualism in language learning situations are explained. This section also provides a survey of literature related to empirical research studies on bilingualism. A two-dimensional approach has been taken with regard to the elaboration of the research findings: (1) studies dealing with linguistic aspects, mostly those of third language acquisition/learning, and (2) studies exploring cognitive outcomes of bilingualism as far as they are related to language learning. These studies uncover recent findings on the association between bilingualism and language learning and provide evidence from various contexts like Canada, Iran, Malaysia, Morocco, and Spain. However, this review is not intended to be limited merely to bilingualism. There are other variables, most importantly, language proficiency, that need more exploration and clarification leading to an operational definition that the researcher will adhere to throughout the study. The relevance of the reviewed literature to a study in an Iranian context is explicated more at the end of this chapter. This chapter synthesizes the different views on bilinguality and outlines the drawbacks of some previous studies.
2.2 Terminology

Bilingualism is a sociolinguistic phenomenon considered as a usual consequence of sustained language contact. Hamers & Blanc (2000) describe language contact as the use of two or more language systems in interpersonal and inter-group relations. The term bilingualism, which represents control of, at least, two languages, is characterized as the most common variant of multilingualism (Herdina & Jessner, 2002). It can also be taken to include many people in the world who have varying degrees of proficiency in three, four or even more languages (Baker & Jones, 1998).

As bilingual individuals will be academically investigated in this study, one needs to be conversant with some definitions and typologies since they may influence research procedures and possibly the final judgments. The field of bilingualism is supplied with notions referring to individuals and communities with two or more languages, the way they acquire/learn them, and how they use languages. The term bilingualism has not been used in a consistent way among researchers and theoreticians. Definitions of bilingualism vary considerably due to the fact that it is not static; rather it is a relative and an interdisciplinary phenomenon (Romaine, 1995) that connects together many scientific fields like linguistics, sociology, and psychology. Every individual involved in a study of bilingualism should take into consideration the most salient characteristic of bilingualism: that it is a multi-faceted phenomenon.

In addition, in considering bilingualism either at a societal or an individual level, one has to accept that there can be no clear cut-off points. It is open to a variety of descriptions, interpretations and definitions (Hoffmann, 1991).
Defining the notion of bilingualism or a bilingual person depends largely on the context where it exists and the purpose for which it is used. This is due to the inherent connection between bilingual development and societal and cultural structures of the social environment. Therefore, it is not surprising that there is no generally accepted definition of bilinguals appropriate for all contexts.

Scholars have basically defined bilingualism and bilinguality, as they exist in their specific contexts of study. For example, Skutnabb-Kangas (1981) uses a combination of the more satisfactory aspects of various definitions in her own measurement. She combines several criteria in her definition of bilingualism:

A bilingual speaker is someone who is able to function in two (or more) languages, either in monolingual or bilingual communities, in accordance with the socio-cultural demands made of an individual’s communicative and cognitive competence by these communities or by the individual herself, at the same level as native speakers, and who is able positively to identify with both or (all) language groups (and cultures) or parts of them.

(Skutnabb-Kangas, 1981: 90)

It is clear from this definition that the author had a specific group in mind when she formulated it, namely, immigrant minority bilinguals. Hence, this definition does not apply to all bilinguals in various contexts.

Hamers & Blanc (2000) seem to consider the fact that the phenomenon of bilingualism is interdisciplinary in nature. They distinguish between bilingualism and bilinguality. According to them,
the concept of bilingualism refers to the state of a linguistic community in which two languages are in contact with the result that two codes can be used in the same interaction and that a number of individuals are bilingual (societal bilingualism); but it also includes the concept of bilinguality (or individual bilingualism). Bilinguality is the psychological state of an individual who has access to more than one linguistic code as a means of social communication; the degree of access will vary along a number of dimensions which are psychological, cognitive, psycholinguistic, social psychological, social, sociological, sociolinguistic, sociocultural, and linguistic.

(Hamers & Blanc, 2000: 6)

Compared to the definition Skutnabb-Kangas proposes, this definition is more comprehensive and is not limited to those very rare cases that achieve native-like control of two languages. Similarly, Adler (1977) proposes the same social, psychological, political, and linguistic aspects to be taken into account in defining bilingualism, but he tired to define bilingualism in a very broad sense so that everyone can assume to be bilingual when he reads this definition. He considers bilingualism as:

Being a social and psychological fact, whether it occurs in an individual or in a group and whatever large or small the knowledge of the non-mother-tongue language. In other words, if an individual feels and acts in a way that brings another mother tongue into play we can speak of bilingualism.

(Adler, 1977: 14)

In their traditional definitions of bilingualism, scholars have established a variety of criteria. Some have emphasized the degree of competence in each language, like Bloomfield (1935:55-56), who pays special attention to users who become so proficient in the new language indistinguishable from the native speakers around them and says, “if this perfect language learning is not accompanied by loss of the native language it results
in bilingualism: native-like control of two or more languages”. If one had to firmly adhere to this high standard criterion, probably the number of so-called bilinguals in the world would be considerably reduced. Very few individuals achieve native proficiency in two languages. Harley & Wang (1997:44) believe, “monolingual like attainment on each of a bilingual’s two languages is probably a myth at any age”.

At the opposite extreme, the term bilingual is used to describe individuals who can speak, write, understand or read a non-native language even to a minimal degree. McNamara (1969: 82) defines a bilingual “as anyone who possesses a minimal competence in only one of the four language skills in a language other than his mother tongue”. Nonetheless, just as it is difficult to imagine people who have really achieved perfect mastery of two languages in all language domains, it is also hard to go to the opposite extreme and consider individuals with a minimal competence in another language as bilinguals.

The other criterion involved in the definitions of bilingualism is the functions and the situations in which the languages are used. The first definitions of bilinguals by function were proposed by Weinreich (1964) and Mackey (1970), who assume that the practice of alternatively using two languages will be called bilingualism and the person involved, bilingual.

In recent definitions scholars insist on the specific characteristics of the bilingual person. For example, Grosjean (1982, 1992) adopting a functional definition of bilinguality i.e., regular use of two languages, considers a bilingual speaker as more than the sum of two complete or incomplete monolinguals in the sense that the bilingual has also developed some unique language behaviour. In Grosjean’s (1992: 51) terms, “Bilingualism is the
regular use of two or (more) languages, and bilinguals are those people who need and use
two or (more) languages in their everyday lives”. He supposes that each language will be
developed to the extent it is needed, and “this may lead to total fluency in both languages
in some bilinguals and a limited fluency in one or both languages for others” (Grosjean,
1982: 256).

He emphasizes that to make any statements about bilinguals’ efficiency or deficiency,
rather than having a fractional view, one must take into account the overall, combined use
of the two languages as a unique linguistic profile and not just the use of one or the other
language. He thinks: “It is probably quite rare for a bilingual to use both his languages in
all domains of his life” (Grosjean, 1982: 257). The reason for such an inequality is that
usually one language is more dominant than the other. Harding & Riley (1986) consider
this definition advantageous because it does not exclude those kinds of bilingualism that
are not perfect.

It is clear that there is slight agreement as to the accurate meaning of the terms
bilingualism and bilinguality, and that it has been used to refer to a wide variety of
phenomena. One view is evidently too narrow, the other too broad; yet, there are some
that can be placed in the middle of the continuum. At this stage, one can see how difficult
it would be to create any concise and all-inclusive definition of a bilingual person or
bilingualism, because, according to (Mackey, 2002), we are not dealing with the same
phenomenon. Terminology does not simply reflect a comprehensive view of the issue of
bilingualism. Many categories of bilinguals have been presented in the literature, which
reflect the various contexts of acquisition, the degrees of proficiency attained by
bilinguals and the functions of the languages in the society. It should be underlined that
there are numerous typologies with regard to bilingualism presented in the literature; however, in the next section the researcher intends to summarize some of the categories as the most relevant ones to the special purposes of this investigation.

2.3 Typology

Scholars have established various approaches to set up firm typologies on bilingualism. Some of these approaches are related to education, and others to sociology. The most important of these, according to Abudarham (1987), have been developmental aspects of second language acquisition/learning bearing both educational and sociological effects on the individual. The parameters that have been taken into consideration in forming most of the studies from a typological viewpoint include:

- timing of acquisition/learning of the second language;
- language development and acquisition/learning contexts;
- relative proficiency in each language; and,
- use and frequency of use of each language.

2.3.1 Timing of acquisition/learning of the second language

In a comprehensive classification, Haugen (1956) approaches defining bilingualism in relation to the stage in an individual’s development when contact with the second language occurs. The earliest stage is ‘infantile bilingualism’. This refers to the simultaneous learning of two languages, when the young infant is hearing both languages at home either from the same individuals, or one language from one and the other from the second (e.g. from father and from mother). This term has now been substituted by the term ‘simultaneous bilingualism’ which, according to McLaughlin (1984: 73), describes “the acquisition of two languages before the age of three”.
Haugen describes a post-infancy acquisition stage, namely, 'childhood bilingualism', which refers to establishment of a second language during the early school years after the first has been acquired in the family. Other terms like 'successive bilingualism' (Beatten-Beardsmore, 1982) and 'sequential bilingualism' (McLaughlin, 1984) have been used to refer to second language acquisition after the age of three.

The next stages described by Haugen i.e. 'adolescent' and 'adult' bilingualism are self-explanatory. These two terms are used to refer to people who have become bilingual after puberty and after their teens, respectively.

2.3.2 Language development and acquisition/learning contexts
Ervin and Osgood (1954) describe language acquisition contexts of bilinguals as 'compound' and 'coordinate'. A compound system would develop in a fused context perhaps as a result of the individual acquiring both languages in a family where both languages are used interchangeably. A coordinate system would develop in a separate language acquisition context and result from experience in situations where there is rarely an interchange between languages. Weinreich’s (1964) 'merged' and 'coexistent' systems typology to discuss the ways a bilingual may acquire/learn his languages explain the same concept that Ervin and Osgood proposed. However, as Weinreich admits, it is probably the case that a bilingual can never be totally coordinate or totally compound. In other words, within a bilingual’s life there may be shifts along this continuum.

Skutnabb-Kangas (1981) introduces another category of bilingualism based on the setting in which languages are acquired/learned. She uses the term 'natural bilingualism' to refer to an individual who “has acquired two languages without formal teaching in the course
of her everyday life as her natural means of communication, and often learned them relatively young” (Skutnabb-Kangas, 1981: 96). The reason this happens may be either internal - to do with the family or external - related to the society. The second category, ‘School bilingualism’, as the name indicates, is the result of conscious learning of a foreign or second language at school through formal teaching. It implies that the learner has not had much opportunity to use the language as a natural means of communication. In this direction Adler (1977: 113) refers to these specifications with the expression ‘ascribed bilingualism’ for natural bilinguals and ‘achieved bilingualism’ for Skutnabb-Kangas’s second categorization.

Lambert (1981,2000) classifies the contexts of acquisition into two categories of ‘additive’ versus ‘subtractive’ contexts where the social values and the relative statuses of two languages may determine the types of bilinguality people possess. ‘Additive bilingualism’ refers to a stage when the linguistic and cultural entities of being bilingual combine to positively affect the individual’s academic and psychological well-being. This situation is found when both the community and the family attribute positive values to the two languages. The learning of an L2 will in no case threaten to replace L1. ‘Subtractive bilingualism’ occurs when the acquisition of the second language adversely affects similar abilities acquired during development of the first language. It develops when two languages are competing rather than complementary. Generally, this form will evolve when an ethno-linguistic minority rejects its own cultural values in favour of those of an economically and culturally more prestigious group. There is a fear of loss of identity, when the more prestigious L2 will tend to replace L1 in the individual’s repertoire. Subtractive bilingualism has been associated with lower levels of language proficiency, psychological disorders, and scholastic underachievement (Lambert, 1975).
2.3.3 Language Proficiency (relative proficiency in each language)

The various types of bilingualism reviewed so far do not tell us about how well a person uses a language, including the four major skills, to be considered a bilingual. Baetens-Beardsmore (1982) proposes a sequential stage that one may progress through different types and levels of bilingual ability and sees a pattern of increasing complexity of skills developing. He categorises a person whose ability to function in a second language increases with its use in a position of ‘ascendant bilingualism’. Conversely, the term ‘recessive bilingualism’ describes the status of an individual who, after some time, begins to experience difficulty in understanding or expressing himself with ease in one of his two languages. This may be the consequence of various social pressures the individuals in many minority groups find themselves undergoing a process of language shift away from their ethnic language and towards the language of the speech community they live in. This means that, although they are becoming more proficient in the L2, they are losing skills in the L1. The ascendant and recessive dichotomy explains the same notions expressed through Lambert’s (1981, 2000) distinction between ‘additive’ vs. ‘subtractive bilingualism.

Another classification in terms of degree of proficiency in the languages used by a bilingual is indicated by the term ‘balanced bilingual’, which is used to describe a person who is as proficient in one language as in the other and who could match the corresponding monoglots’ linguistic ability. However, one would argue that a balanced bilingual is likely to be something of an ideal since most bilinguals are likely to be more fluent or generally proficient in one language or, at least, in some uses of it (including listening, reading, writing and speaking). In other words, they will tend to have a stronger or dominant language and a weaker one. This definition, as many scholars including
Baker (1993), Bochner (1996), and Baker & Jones (1998) agree, excludes the much more common instance of individuals who use one of their languages as an important medium of communication, but may not be entirely proficient in it.

At the opposite extreme of the types mentioned above a distinct type, namely, ‘semilingualism’ is proposed. This category is regarded as not having sufficient competence in either language. Baker & Jones (1998) define a ‘semilingual’ as someone with deficiencies in both languages when compared with monolinguals. According to Baker & Jones (1998: 14), “such a person is considered to possess a small vocabulary and incorrect grammar, consciously thinks about language production, is uncreative with both languages, and finds it difficult to express emotions in either language”. This concept, however, refers to an impossible state in terms of mentality. Every individual with normal intelligence is expected to develop ability in at least one language at a certain stage. In other words, having a small vocabulary size, incorrect grammar and finding it difficult to express emotions are the language characteristics of a growing child who is engaging in trial and error to learn the proper language. Even in bilingual situations learning at least one language, as Edwards (1994) notifies, is a capacity available to anyone of normal talents with the right social conditions.

2.3.4 Use and frequency of use of each language

The use that bilingual speakers make of each language will depend very much on sociolinguistic factors in the speech communities surrounding them. Many scholars including Baetens-Beardsmore (1982), Hoffmann, (1991), and Errasti (2003) explain factors that may influence a bilingual’s use of language in society. These factors may be related to the language used by the individuals’ parents, their attitudes, cultural and political forces, and the relative status of the languages in the speech communities. Thus another category is to
be added to the previous classifications, namely, ‘functional bilingualism’ that, according to Baetens-Beardsmore (1982), emerges as a result of the emphasis that is placed upon what the speaker has to do with his language in the society in which he lives.

Before the concept of functional bilingualism is explained, one needs to make clear what ‘receptive/passive bilingualism’ describes. This type refers to a person who understands a second language either in its spoken or written form. For example, a person who can read in L2 (e.g. English), but is unable to speak it can be considered as a passive bilingual.

Baetens-Beardsmore (1982) and Hoffmann (1991) describe functional bilingualism in terms of ‘productive bilingualism’ that indicates the ability to speak as well as understand the languages, to write as well as read them. Nevertheless, just as linguistic proficiency is something variable and unstable, varying degrees of functional bilingualism have been proposed because different bilinguals have distinct uses. The following possible combinatory patterns of bilingual functional ability across the language skills including some intermediate stages are proposed by Baetens-Beardsmore (Table 2.1), although no information is given on the extent of proficiency in each of skills in the languages one uses:
Table 2.1: Patterns of Individual Bilingualism (Baetens-Beardsmore, 1982: 17)

<table>
<thead>
<tr>
<th>Language Skills</th>
<th>Productive Bilingualism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Listening Comprehension</td>
<td>L1 L2</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>L1 L2</td>
</tr>
<tr>
<td>Oral Production</td>
<td>L1 L2</td>
</tr>
<tr>
<td>Written Production</td>
<td>L1 L2</td>
</tr>
</tbody>
</table>

|                          | A          | B          | C          | D          | E          |
| Listening Comprehension  | L1 L2      | L1 L2      | L1 --      | L1 L2      | L1 --      |
| Reading Comprehension    | L1 L2      | L1 --      | L1 L2      | -- --      | -- L2      |
| Oral Production          | L1 --      | L1 --      | L1 --      | L1 --      | L1 --      |
| Written Production       | L1 --      | L1 --      | L1 --      | -- --      | -- --      |

- : This indicates that the individual does not have that language skill in either L1 or L2.
A, B, ... E refer to the various patterns of productive or receptive bilingualism (e.g. a person with oral production ability in his L1, but not in his L2 can be considered as a receptive bilingual).

Many examples of the combinations suggested above can be found in various situations used by bilinguals. A bilingual may choose one language appropriate in certain circumstances, in certain places or with certain people; therefore, they develop skills as needed for particular circumstances. The pattern of productive bilingualism outlined by Baetens-Beardsmore implies that biliteracy is not to be assumed as an attribute of active bilingualism “just as bilingualism among young children usually excludes any form of literacy” (Hoffmann, 1991:25).

Finally, a distinction made between the terms ‘individual bilingualism’ and ‘societal bilingualism’ mainly expressed through the term ‘diglossia’ (Ferguson, 1959) seems to be
relevant. Ferguson observed that some dual language speakers used each variety of the same language in different situations and coined the term ‘diglossia’ to describe this phenomenon. The varieties may be in the form of two dialects of the same language, or even, according to Fishman (1968), two distinct languages as similar as Spanish and Italian, or as dissimilar as English and Cantonese used by the same people. In diglossic situations, the two languages can exist side-by-side throughout the community, with each having a definite role to play, and individuals choosing the appropriate language when they need it. Ferguson views a superposed variety as the ‘High’ (H) and a regional (native) one as the ‘Low’ (L) variety. Each variety has a specific function and is used in a specific situation or ‘domain’. The H variety (e.g. classic standard Arabic) is likely to be used in academic, literacy and political situations; the L variety (e.g., spoken Arabic dialects or colloquial), in personal and social situations. Baetens-Beardsmore (1982) and Baker (1993) refer to this situation as ‘diagonal bilingualism’. (The variety of bilinguals and all the notions on typologies including some of the typologies that have not been explained so far are summarized in Appendix A.)

What has been reviewed so far is part of the literature devoted to definitions and categories of bilingualism that are somehow relevant to the main objectives in this study. All these have covered only some of the important factors to be accounted for in a well-based definition or category. These issues show that varying levels of bilinguality may exist in the same person over time. Therefore, it can be maintained that all definitions are arbitrary to a greater extent and can only be applied to specific situations. However, in order to avoid dangers of over-generalization to the unlimited cases of bilinguals and to benefit from a clear frame of reference, a researcher should identify the groups of bilinguals that s/he intends to investigate. The characteristics of the bilingual group in the
context of the present investigation in terms of typology are explained as follows:

**Timing of acquisition/learning**

**Child/ Simultaneous/Successive bilinguals:** They usually begin to acquire/learn their second language (Persian) during their childhood. This happens either in early childhood or around the age of 5 when they start school.

**Context of acquisition**

**Compound/ Merged Bilinguals:** Their language system is developed in a fused context as a result of learning both languages in the family, community, and peer groups interchangeably.

**Relative proficiency in each language**

**Ascendant Bilinguals:** Their two languages combine in a complementary and enriching fashion and their ability to function in both languages is developing due to increased use.

**Use of Language**

**Functional Bilinguals:** They operate in two languages according to the requirements of the community. Azeri Turkish as L1 is the language they use in their everyday lives. They have developed their general competence through continued interactions. They can understand, speak, read and write in their second language, Persian.

It should be underlined that this classification is at an individual level. In terms of the type of bilingualism in society one can classify the existing context of study as a ‘Diagonal Bilingual Context’. (For more details on the language functions in the society see the context of the study in Chapter 1).
In what follows, various aspects of bilingual development, as related to the present investigation, are reviewed. As previously mentioned, the main concern in this study is the possible effects of bilingualism on certain aspects of language learning. Therefore, both the general aspects central to language learning, like that of cognitive skills as well as the specific ones, including linguistic skills, are observed. These areas incorporate the linguistic, cognitive, and metalinguistic developments that bilinguals achieve as a result of becoming bilingual.

Until the 1960s, there was a common sense that being bilingual was a disadvantage. Bilingualism was viewed as the cause of an inferior intelligence and a kind of linguistic handicap causing mental confusion in bilinguals. However, most researchers have challenged this idea in recent decades. It is suggested that in normal circumstances there is no cognitive deficit as an outcome of being bilingual. In other words, the earlier views that bilingualism meant a splitting of finite cognitive potentials or a diminution of intellectual capacities have long been retired by research (Edwards, 2003). They are replaced by the view that bilingualism does not mean failure. Indeed, some have argued that increases in the linguistic repertoire correlate with greater cognitive flexibility as well as a different way of perceiving the world (Cummins, 1996), heightened sensitivity to linguistic meanings, enhanced awareness (Baker & Jones, 1998), and understanding more than one way of thinking (Tsokalidou, 2005). Herdina & Jessner (2002) hold a similar view in favour of bilinguals concerning their linguistic resources. They believe that not only do bilinguals' linguistic resources generally appear to be not inferior to those of their monolingual counterparts, there also seems to be ample evidence of interaction between the two language systems. Tsokalidou (2005:61) considers linguistic pluralism a unique asset, “a gift that does not cost pay money but has great value.”
The popular belief that bilinguals may be better language learners than monolinguals is supported by research both on linguistic outcomes of bilingualism (Cenoz & Jessner, 2000; Keshavarz & Astaneh, 2004; Nor-Azmi, 2004, etc.) and its cognitive outcomes related to language learning (Lambert, 1981; Kormi-Nouri, et al 2003; etc.). The next section outlines some of these positive views.

2.4 Bilinguality and Linguistic skills

Bilinguality results in a certain qualitative change in the speaker’s language system. It is believed that the representation of more than one language differs in a quantitative manner from the representation of a single language (Paradis, 1981; Cook, 1992; Hoffmann, 2001). Cenoz & Jessner (2000) attribute this change to the fact that in acquiring additional language/s, individuals have to adapt their whole language system to meet new environmental and psychological requirements. Bilinguals may be different from monolinguals in L1 linguistic knowledge. They have different metalinguistic awareness and different cognitive processes from monolinguals. Cook (1992: 557) remarks: “These subtle differences consistently suggest that people with multicompetence are not simply equivalent to two monolinguals but are a unique combination”.

One can, therefore, assume that the acquisition/learning of a further language leads to the emergence of competences (e.g. new linguistic skills) as well as language-related cognitive processes (e.g. meta-cognitive strategies, metalinguistic awareness), which form part of the learners’ repertoire. Herdina & Jessner (2002) classify these skills as language learning skills and language management skills that are linked with advanced performance as far as additional language learning processes are involved.
Researchers of bilingualism, such as Jessner (1999), have repeatedly highlighted a useful aspect of language learning, i.e. to learn how to learn a language or how to acquire the skills needed for the development of another language system as one of the factors which may be considered developed at a higher level in third language learners than in second language learners. This is due to prior experience with additional language learning processes. These differing language-learning strategies in multilinguals are, thus, assumed to be connected to an enhanced progress in learning additional languages.

In a communicative act, a bilingual speaker selects a certain language from her/his inventory as the medium for communication. This largely depends on the communicative needs that the speaker recognizes in interpersonal relations. Yet, this inventory incorporates not only more than one language but also the means of both putting different language resources together for use in communicative acts and at the same time keeping them apart. Jessner (1999) defines this characteristic as “language management”: the multilingual’s art of balancing communicative requirements with language resources. Baker & Jones’ (1998:54) suggestion is that “because bilinguals living in a bilingual environment often switch languages, they subconsciously develop a sensitivity of awareness to the communication needs of a particular situation”. They posit that bilinguals are constantly monitoring which language to use in different situations; they may be more attuned to the communicative needs of those with whom they talk. Baker and Jones consider this greater sensitivity as one of the communication advantages of being bilingual.

In the same way, Pinto, Titone, and Trusso (1999) recognise this ability of bilinguals as

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3 Learning strategies are defined as “how a student approaches the task of acquiring new knowledge.” (Bochner, 1996: 83)
meta-communication that helps them to reconstruct the communicative intentions of the speakers in an exchange by interpreting the totality of linguistic markers, which highlight the main parameters of every speech situation.

Cenoz & Valencia (1994) relate the ability of bilinguals to manage communication acts efficiently to their enhanced communicative competence\(^6\). It is believed that communicative competence and communicative methods reach a higher level among bilinguals by virtue of their experience with more than one language. Grosjean (1982, 1992) suggests this communicative competence makes use of one language, of the other language or of the two together in the form of mixed speech, depending on the situation, topic, and interlocutor.

In addition, research suggests that this advantage in communication makes bilinguals more empathetic with listeners’ needs in communication. Otherwise stated, when meeting those who do not speak their language particularly well, bilinguals may be more patient and tolerant listeners than monolinguals (Baker & Jones, 1998; Fabbro, 1999).

In an attempt to explain the representation of the linguistic competence of bilinguals and how they integrate their skills to put them into use, scholars have developed various models of linguistic systems related to bilinguals. Some of these are briefly explained below.

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\(^6\) Canale and Swain (1980: 20) define communicative competence as "a synthesis of knowledge of how language is used in social contexts to perform communicative functions, and knowledge of how utterances and communicative functions can be combined according to the principles of discourse". This term was introduced originally by Dell Hymes (1972).
2.4.1 Linguistic Competence of Bilinguals

Cook (1992) presents the linguistic state of mind using the term ‘multicompetence’ that describes the compound state of mind with more than one grammar. It starts when systematic knowledge of an L2 is not assimilated to the L1. Cook contrasts multicompetence with monocompetence - that is the state of the mind with only one grammar. He argues that the difference between these two states of mind is not only one of degree, but also one of kind as multi-competent speakers have a different knowledge of their languages from that possessed by monolinguals.

Cook’s explanation of a bilingual’s linguistic competence corresponds to Grosjean’s (1982, 1992) view of a bilingual person in many ways. Grosjean compares a bilingual speaker to a high hurdler who combines the two types of competence, jumping and sprinting in one person, although he is neither a sprinter nor a high jumper. When compared individually with the sprinter or the high jumper, the hurdler meets neither level of competence, and yet, when taken as a whole, the hurdler is an athlete in his/her own right. No expert in a track and field would ever compare a high hurdler to a sprinter or to a high jumper even though the former blends certain characteristics of the latter two. In Grosjean’s view, the high hurdler is an integrated whole, a unique and specific athlete, who can attain the highest levels of world competition in the same way that the sprinter and the high jumper can. Grosjean makes this analogy since he believes in many ways a bilingual is like the high hurdler “an integrated whole, a unique and specific speaker-hearer and not the sum of two complete or incomplete monolinguals” (1992: 55). He maintains that the bilingual is a human communicator who has developed communicative competence in the two languages, and possibly in a third system sufficient for everyday life. Grosjean’s attempt to present the bilingual speaker in a holistic approach has
influenced the scientific debate on multilingualism, particularly the one proposed by Herdina & Jessner (2002). This psycholinguistic aspect of learning additional languages that provides further insight into multilinguals’ linguistic systems is modelled on the Dynamic Model of Multilingualism.

2.4.2 A Dynamic Model of Multilingualism

In order to describe the nature of multilingualism in its various patterns and to be able to explain the changing nature of the linguistic phenomena linked with learning additional languages, Herdina & Jessner (2002) developed an adaptive and dynamic model of multilingualism (henceforth DMM). This model was developed based on results of bilingualism and second language research. Herdina & Jessner (2002:52) state that, “it is similar to systems with two languages”. This model intends to provide an explanatory framework for the models that serve as a link between second language acquisition (SLA) and bilingualism, in so far as it can explain multilingual acquisition patterns.

According to DMM, multilingual proficiency can be described as the result of the effects both on the language systems and the cognitive system, which are subject to change. In Herdina and Jessner’s view, the theory of dynamic systems, which has been used in other sciences, such as biology and psychology, presents a new approach to psycholinguistic phenomena by suggesting a holistic view of multilingualism. DMM presents multilingualism as a dynamic process of language development, where existing language systems show influence on developing ones. This model can, therefore, make the connection between SLA and bilingualism more apparent. Herdina & Jessner’s (2002) point of view is that like biological systems, psycholinguistic systems should be seen as open systems rather than closed systems and allow for variability in the process of
language learning. They point to the necessity of developing a dynamic perspective to explain the complex interdependencies between social, biological and personal factors in language learning and the changing nature of some of them (e.g. motivation) in language learning.

Apart from dealing with cross-linguistic influence in multilinguals and the advantages gained from contact with several languages, the model also concentrates on cognitive aspects of language learning. Within the construct of multilingual proficiency, metalinguistic awareness is considered a key component in language learning. This factor becomes more crucial in third language acquisition (TLA) than in second language acquisition (SLA), as with increased learning experience, it can be expected that a speeding up of the language-learning process occurs. This, according to Jessner (1999), implies that the nature of metalinguistic skills in multilinguals differs from those found in monolinguals through frequency of use. DMM characterizes the speaker’s system as an ‘enhanced multilingual monitor’ (EMM), which is used by the multilingual speaker to watch and correct his language/s in a multilingual context.

Concerning third language acquisition, Herdina & Jessner (2002) established a Multilingual factor (M Factor), including the EMM. This brings advantages when a bilingual acquires/learns a third language. They consider the M-factor as a dispositional effect that will have a priming catalytic effect in TLA. This model implies that a difference can be expected in the development of communicative efficiency exhibited by monolingual and bilingual speakers in TLA. The multilingual factor expresses an essential difference between multilingual and monolingual speakers.
It is assumed that the multilingual system:

(a) Contains components the monolingual system lacks, (b) Even those components the multilingual system shares with the monolingual system have a significant difference within the system.

(Herdina & Jessner, 2002: 130)

Acquisition/learning of a third language also raises issues, such as the levels of proficiency attained by the learners and linguistic interdependence. To account for the positive results of research on bilingual matters, Cummins (1976, 1979) developed ideas on the linguistic and cognitive consequences of bilingualism described through the "Threshold Hypothesis" and the "Interdependence Hypothesis".

2.4.3 The Threshold Hypothesis

Inspired mainly by the positive results of research on bilingual and immersion education programs, Cummins (1976) developed important ideas on the linguistic and cognitive consequences of bilingualism. He believes that one has to assume, first, a 'minimal threshold of linguistic competence' and, second, a 'developmental interdependence' hypothesis to account for the possible effects of bilinguality.

According to the Threshold Hypothesis, the level of competence attained by a bilingual in his L1 and L2 may operate as an intervening variable mediating the effects of the bilingual's experience on cognitive growth. In other words, it is assumed that those aspects of bilingualism which might positively influence cognitive functioning, are unlikely to come into effect until the individual has attained a certain minimum or threshold level of competence in his languages. Cummins calls this level the 'Threshold'.
He thinks that a minimum level of first language cognitive/academic development is required for success in second language learning.

Cummins believes that individuals who have attained a very high (native or near-native) level in both their languages belong to the group that shows positive effects when various aspects of cognitive development are measured. Those, on the other hand, who have reached native competence in one language only, normally their first language, but with a lesser command of the other language, will show neither positive nor negative effects, i.e. their achievement will not differ from that of monolinguals. Finally, those who achieve a native level in neither of their languages and are forced during a prolonged period to function in a less well-mastered language would, according to the Threshold Hypothesis, show negative effects i.e. do less well than corresponding monolinguals.

Ringbom (1987) refers to this threshold level as ‘automatization degree’, and believes that it should be reached if a learner is to take real advantage of his other languages in learning additional languages. In his view, automatization is important, at least, in oral communication.

The findings of a series of Australian studies (Ricciardelli, 1992), and the one carried out in a Spanish context (Errasti, 2003), are consistent with the Threshold Hypothesis and illustrate the types of advantages that bilingual information processing might confer on individuals. However, some other studies, like that of Diaz and Klinger (1991), who found out positive effects of bilinguality among a bilingual group with low level of proficiency in their L2, have provided counterevidence to Cummins’ proposition.
The Threshold Hypothesis is subject to some limitations, although Baker (2001) considers this theory, as well as the Interdependence Hypothesis, as the building bricks of notions on bilingualism and bilingual education.

2.4.3.1 Limitations of the Threshold Hypothesis

The Threshold Hypothesis has been criticized in various aspects. Lasagabaster (1998) criticizes the Threshold Hypothesis on the grounds that the threshold levels are not sufficiently defined. A critical examination of this hypothesis indicates no regular way of measuring levels of proficiency proposed. There seems to be no actual examples of what these levels should be. Cummins (1991b) refers to this as a major limitation of the Threshold Hypothesis. He confirms that this hypothesis has not specified what the threshold might be in linguistic terms and, thus, there is little direct support for the positing of specific thresholds of proficiency.

In addition, the levels of language competence in both languages, more particularly in the developmental stages of second language, cannot be determined in absolute terms. They change as the individuals pass through various developmental stages. Furthermore, bilinguals differ a great deal from one another in the degree of proficiency they achieve at different linguistic levels including in various language skills mainly determined by the requirements of the environment. This is due to the fact that bilingualism is an unstable phenomenon (Grosjean, 1982). Therefore, it seems that the threshold hypothesis lacks consistency with the notion of relativism, which is an important factor in discussing bilingualism of any type.

Finally, the Threshold Hypothesis can be criticized on sociolinguistic grounds. A sound
theory of bilingual development should take into account many other non-linguistic variables including family, society, culture, and language use among bilingual individuals. This hypothesis, according to Baker & Jones (1998), may artificially isolate these ingredients in a bilingual’s experience.

The Threshold Hypothesis was later supplemented by the Interdependence Hypothesis, which suggests that L1 and L2 academic proficiencies are developmentally interdependent.

2.4.4 The Interdependence Hypothesis

As previously mentioned, the Threshold Hypothesis does not define in any precise way what aspects of language proficiency should reach the threshold level. This invoked Cummins’ (1979) proposal of the distinction between cognitive/academic language proficiency (CALP) and basic interpersonal communicative skills (BICS). A brief explanation of these two terms is necessary for an understanding of the basic concepts proposed by the Interdependence Hypothesis.

These notions are broad aspects of linguistic competence, surface linguistic competence and cognitive linguistic competence. The former are general cognitive or academic skills, such as the range of vocabulary and the knowledge of complex syntax; the latter relate to the visible features of language, which are relatively easy to measure, and are closely related to the use of language in interpersonal communication (e.g. pronunciation, fluency). Cummins (1991a) holds the view that the less cognitively demanding surface aspects of language (BICS), such as oral proficiency (e.g. conversation in a shop), develop separately in L1 and L2, but that the cognitively demanding and underlying
cognitive/academic proficiency is common across languages. This common underlying proficiency is said to facilitate the transfer of cognitive academic abilities from one language to another.

As such, a theoretical foundation for the Interdependence Hypothesis was provided. According to the Interdependence Hypothesis, there is a positive and significant relationship between learners’ first language development and their second language development. It is believed that intensive exposure to the L2 in school leads to rapid bilingual development with no negative effects on the L1, if the outside environment (e.g. institutional support, particularly schooling) provides sufficient stimulus for LI maintenance. In cases where the L1 is not sufficiently developed, high exposure to L2 in the school will hamper the continued development of the L1. In turn, the fact that the L1 remains poor will prove a limiting factor in the development of the L2. In other words, if the L1’s degree of development is low or inadequate at a particular stage, the outcome will be difficulties, on the part of the learner, to attain an adequate level of competence in the L2. Cummins assumes that such interrelationships occur predominantly in the case of performance on academic tasks, not on the less demanding conversational tasks. A task is defined as more academic as the context reduction and the cognitive demands increase (Verhoeven & Venmeer, 1992: 127).

In agreement with Cummins, other researchers have also proposed the interdependence of linguistic behaviour among multilinguals (Jessner, 1999; Hamers & Blanc 2000; Herdina, Cenoz & Jessner, 2000). These scholars posit that a similar interdependent relationship might be expected to hold good in the case of multilingual acquisition/learning so that different degrees of proficiency in the first and second languages would affect the acquisition/learning of the third (or fourth) language. It is highlighted that the number of
preceding language systems or language acquisition/learning processes will determine the rate of growth of the specific language system under investigation.

However, one has to bear in mind that these assertions are merely hypotheses and have certain limitations and need more strong empirical support, both in terms of theory and practice (Appel & Muysken, 1987; Hoffmann, 1991).

### 2.4.4.1 Limitations of the Interdependence Hypothesis

One of the limitations that Hoffmann (1991) attributes to the Interdependence Hypothesis is that, similar to the Threshold Hypothesis, it takes a narrow view of cognitive functioning and bilingualism. It does not follow a wide range of cultural, social, and political factors that can also influence the attainments of the performances of the subjects. By proposing the Interdependence Hypothesis, Cummins emphasizes social, more particularly institutional support, for both the languages from society. However, his approach towards specifying social and institutional support seems to overemphasize schooling in both languages. Whereas, institutional support, apart from schooling, may emerge from some other socio-cultural sectors, that may provide enough support for language maintenance, but not necessarily lead to biliterate individuals. Baker (2001) mentions a number of factors affecting vitality and maintenance of language as the extent and nature of a minority language use in a wide variety of institutions in a region. Such institutions will include national, regional and local governments, religious and cultural organizations, the mass media, commerce and industry, and not least education. Valencia & Cenoz (1992) add the family and geographical contexts (e.g. geographical distribution and the number of the speakers of the language) to the socio-cultural context. They believe that knowledge, use and valorisation of the bilingual’s two languages within the
family context, by the parents — and especially by the mother because of her symbolic role in the children’s development, will be particularly relevant in these contexts, and will influence the subject’s cognitive and social development.

Accordingly, in spite of the fact there is a certain amount of research supporting Cummins’ proposition of the Interdependence Hypothesis, it is subject to question on sociolinguistic grounds (Troike, 1984). The question is: how are the effects of individual and socio-cultural factors accounted for in this hypothesis? Troike (1984) suggests that there is counterevidence, suggesting that social and cultural factors may be much more powerful than purely linguistic factors in influencing educational attainment, and that, indeed, linguistic factors may be simply a second or third order reflection of the social and cultural context. Similarly, Errasti (2003:40) states, “social factors are as important as educational factors when it comes to understanding bilingual and trilingual development in contexts with two languages”. In fact the strong belief, according to Morris (1992), is that the curriculum cannot do the job which is traditionally fulfilled by a speech community.

Another question that may arise in one’s mind concerns the weak version of the Interdependence Hypothesis. The question posed is, what happens to the other conversational/aural and oral (BICS) skills. Verhoeven & De Jong (1992) argues that, apart from language-specific achievement, non-linguistic interactive skills must underlie conversational skills in the L1 and L2. They challenge this aspect of the Interdependence Hypothesis through their study on assessing bilingual proficiency. Their findings confirmed that there is clear evidence that, in bilingual development both contextual and decontextualised abilities in the L1 and L2 are interdependent. In other words, it is
interesting to note that there is more evidence for transfer of context embedded communicative skills than of decontextualised grammatical skills. Nevertheless, more scrutiny on various aspects of linguistic productions both context-embedded and context-reduced tasks seems warranted.

Moreover, the distinction made between the less cognitively demanding tasks (BICS) and cognitively demanding ones (CALP) seems to overlook the value of communication through conversational skills. Although conversational skills are related to an early stage in achieving proficiency, they, like the other academic/literacy tasks make specific demands on the part of the learners. Bachman (1990) describes these communicative language abilities as consisting of both knowledge or competence and the capacity for implementing or executing that competence in appropriate, conceptualised communicative language use. Therefore, in a conversational act, many skills come to play very important roles. A real commutation involves interaction between more than one participant, in which the individuals should be creative enough to deal with unpredictable and, perhaps, complex linguistic and socio-cultural contexts. All these are based on real psychological conditions (Skehan, 1989).

The time is now to see how these theories have been applied to explanations as far as bilinguality and learning additional language/s is concerned.

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7 According to Harley (2000) language is used in different situations. The former (CALP) is typical of many academic contexts and involves primarily linguistic cues to meaning while the latter (BICS) is a typical of a face-to-face interaction where the communication is supported by a range of contextual cues.
2.5 Bilinguality and learning of a Third language

This field of research presents a rather young area of interest within linguistics, which has been gaining more ground recently. Different aspects of this phenomenon are reflected in the publication of a number of research studies. Third language learning refers to the acquisition/learning of a non-native language, English in most cases, by learners who have previously acquired/learned two other languages.

Studying third language acquisition, as Cenoz (2003: 71) states, "brings together two fields, namely, second language acquisition and bilingualism, which have traditionally ignored each other". It is thought that acquiring additional languages will be easier if one knows more languages; therefore, bilinguals seem to possess a facility for learning a third language (Edwards, 1994, 2003; Clyne, 1997, 2003; Herdina & Jessner, 2002). The explanation is that when acquiring a third language, having previous contact with two linguistic systems results in a variety of strategies developed by the experienced language learner in contrast to the inexperienced one. Researchers, such as Magiste (1984), Klein (1995), and Jessner (1997) make a difference between learning an L3 and an L2 in that an L3 learner brings with him a wealth of knowledge and strategies that a learner of a first L2 does not. Although both types of learners make use of similar cognitive capabilities, such as general learning strategies, L3 learners bring more to their learning that can be attributable to the previous language learning experience. Concerning additional language learning Edwards (2003: 29) proposes that, "knowing one variety may make it easier to learn subsequent ones (particularly if they are closely related, but theoretically even if they aren't)". This means that the more languages one knows, the easier it is still to learn additional ones.
Ringbom (1987:112) also associates some positive skills with previous language learning. He believes that in addition to more relevant experience among L3 learners than L2 learners, comprehending an additional language will be easier for L3 learners since they can make use of many more cues than the L2 learner. Furthermore, he believes that a bilingual has a wider perspective on language than a monolingual; has a greater awareness of language variation and the possibilities of expressing the same ideas by different linguistic means. Some scholars, like Ellis (1994) and Klein (1995), believe that the speed of learning an additional language is subject to change with the number of the languages one knows. This is perhaps due to the development of advanced cognitive skills in language learning that can lead to the speeding up of the learning processes.

According to Cenoz (2003), there have been two approaches undertaken when providing explanations of the relationship between bilinguality and additional language acquisition/learning: one of them is linked to the more ‘process-oriented’ tradition of SLA research and the other to the ‘product-oriented’ one. She believes that both these approaches are necessary and complement each other, and are both more useful in providing explanations, regarding the possible effects of bilinguality. These studies on bilingualism have revealed that it presents positive cognitive effects and that these effects are compatible with the possible beneficial effects of bilinguality on third language acquisition/learning. The studies in which the linguistic production as well as learning strategies of bilinguals and monolinguals have been compared have reported that multilinguals use a wider range of linguistic and mnemonic strategies and are more flexible in their use than monolinguals (Thomas, 1988; Bild & Swain, 1989; Cenoz & Valencia, 1994; Cenoz, 2003). These studies focused on both general and specific aspects of language proficiency. The next subsection is a summary of some of the research
2.5.1 Studies on Third Language Learning

In a small-scale study, Thomas (1988) compared the scores in French of English-Spanish bilinguals with those of English-speaking monolinguals. Thomas conducted her investigation on second and third language learning among bilinguals compared with monolinguals. The study compared 16 bilingual college students learning French as a third language with 10 monolinguals learning French as a second language\(^8\). It was conducted on students enrolled in an elementary French class at Texas A&I University in South Texas, where 51% of the student population was Hispanic English-speaking students with prior knowledge of Spanish, compared with monolingual English students. In this investigation, following one semester of instruction, the students were required to undertake some vocabulary, grammar and composition tasks.

Thomas's analysis of the data revealed that the group of English-speaking students with prior knowledge of Spanish performed significantly better than monolingual English-speaking students learning French as a second language on tests of French vocabulary and grammar as well as on writing. In a further analysis among the bilinguals (with reference to their literacy skills in their L1), Thomas showed that that there was no significant difference between two types of bilinguals (those having literacy with previous instruction of, at least, two years in their first language, and those without literacy in their L1) in their scores on the vocabulary test, while a significant difference was revealed in the grammar test results in favour of the first group of bilinguals.

\(^8\) The term 'second language' refers to learning a language other that the first language in terms of order (e.g. L1, L2, L3, L4...Ln). However, it may be learned in a foreign context or the immediate environment of the individual.
Thomas (1988: 239) attributes the difference in performance between bilinguals and monolinguals to the students’ different levels of metalinguistic awareness. She believes that bilinguals learning a third language seem to have developed sensitivity to language as a system, as suggested by Vygotsky (1962). This helps them perform better on those activities usually associated with language learning. She comments on her findings as follows:

It is of particular interest to note that knowledge of two languages appears to facilitate the college students’ performance of both linguistic manipulation and communicative tasks. In the compositions the bilinguals as a group appear to have developed the ability to avoid those errors, which act as a barrier to comprehension, and manipulate the structures learned in class to communicate with native speakers.

(Thomas, 1988: 240)

In the same way, Bild & Swain (1989) in their research on a group of bilinguals, as compared with their monolingual peers, concluded that knowing a second language facilitates learning of a third language. In this study, the learner’s first language was not an official language in the community, although a few hours within the school curriculum were devoted to the minority language. The researchers’ concern was the ability of the students who were already bilingual in a minority language and English to learn a third language, French. Further, they made use of the concepts of “Cognitive Academic Language proficiency” (CALP) and “Basic Interpersonal Communication Skills” (BICS), and the framework created by contextual support and cognitive involvement⁹ as the basis.

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⁹ Cognitive involvement can be conceptualised in terms of the amount of information that must be processed simultaneously by the individual in order to carry out the activity. Persuading another individual that your point of view rather than her/his is correct, or writing an essay on a complex theme are examples of such activities (Cummins, 1984).
for the analysis of language in their investigation. Bild and Swain hypothesised that bilingual students would perform as well as or better than unilingual students on both context-embedded and context-reduced tasks in a set of tests of French proficiency. They also accounted for the idea of transfer by selecting some of their bilinguals from a language closely related to French (Italian), and some others speaking a language more distantly related to French (English or a non-Romance language). Having matched the students in grade eight, in terms of their language background, academic achievement and parental information, Bild and Swain measured the French proficiency of the subjects' through a set of story telling and cloze tests, both of a context-embedded and context-reduced nature.

As they hypothesised, far from being hindered in the learning of French, bilinguals performed better than monolinguals on almost all of the measures. However, no discernable differences were found with respect to their performance on context-embedded and context-reduced tasks. It seemed that bilinguals benefited from their additional linguistic knowledge. They further concluded that the bilinguals were able to transfer from their first two languages into a third language.

Similar results were obtained by Cenoz and Valencia (1994), who proved that Basque-Spanish bilinguals obtained higher scores in English than Spanish monolinguals. They designed their research to evaluate the effects of bilinguality on third language learning in a bilingual community, the Basque country. They measured the English language achievement of a total of 321 participants including 167 bilinguals (52%), as opposed to 154 monolinguals (48%) within an age range of 17-19. In addition, they included other cognitive, socio-cultural, socio-psychological, and educational variables in their study. In
order to measure different dimensions of language proficiency, they administered various English language achievement tests including the four language skills (speaking, listening, reading, and writing). They developed some questionnaires to hold other variables constant. The results of their analysis supported their main hypothesis that bilingualism has a positive mediating effect on third language learning. They demonstrated that the inclusion of bilingualism significantly improved the prediction of English language achievement, once the effect of the other predictors had been accounted for. Furthermore, it was confirmed that there were no interaction effects between bilingualism and the other predictors. They attributed this positive linguistic outcome to (a) metalinguistic awareness not transfer, since there was no similarity between Basque and English and (b) greater sensitivity toward the needs of other speakers.

In addition to the studies that have observed differences between the attained general language proficiency of bilinguals and their monolingual peers, many studies have provided evidence from specific aspects of language proficiency. Some of these studies are outlined below:

Bilinguals are reported successful in terms of their academic achievement, as compared with their monolingual peers. In his study of bilinguals compared with their monolingual counterparts, Papapavlou (1999), as a part of his research, investigated the academic success of 39 bilinguals from various language backgrounds and 210 monolinguals in a monolingual Greek Cypriot-speaking school environment, and their mastery of Modern Greek. He developed a questionnaire, which examined the subjects’ backgrounds, their degrees of bilinguality, and the number of languages they spoke. He also consulted the
end of the academic year class reports (which included final grades), as an objective measure for comparing the performances of the two groups.

On a closer examination of the grades, Papapavlou (1999) concluded that bilinguals’ academic achievement was better than that of the monolinguals. According to Papapavlou, bilinguals enjoyed this advantage in spite of much less exposure to Modern Greek. To interpret the academic success of culturally diverse students in his study, Papapavlou points to Cummins’ (1996) work, who has the following to say:

> When students’ developing sense of self is affirmed and extended through their interactions with teachers, they [culturally diverse students] are more likely to apply themselves to academic effort and participate actively in instruction. The consequent learning is the fuel that generates further academic effort. The more we learn, the more we want to learn, and the more effort we are prepared to put into that learning.

(Cummins, 1996: 7)

In an attempt to evaluate the impact of bilinguality on L3 proficiency, Sanz (2000) provided evidence in favour of a positive relationship between Catalan/Spanish biliterate bilingualism and knowledge of English as a foreign language. Sanz, thus, added to the evidence concerning the positive effects of bilingualism. Sanz tested her hypothesis on 201 high school juniors from two private schools in Spain. The participants completed the vocabulary and structure sections of the CELT English Proficiency test and some questionnaires eliciting information about the participants’ socio-cultural, psychological profiles as well as their exposure to the English language. The results of Sanz’s study replicated those of Cenoz & Valencia (1992) i.e., bilingualism appeared to explain superior English achievement independently of other variables. Sanz attributes the superiority of bilinguals over monolinguals to their biliteracy rather than to bilingualism. She proposes
that literacy in the two languages facilitates the acquisition of a third language. However, a question may arise in the mind of the reader pertaining to Sanz’s interpretations of the findings as follows:

Can one ignore the other possible positive aspects of being bilingual, and attribute the findings only to biliteracy? Even when the bilingual learners use their first language as help, they may use some strategies rather than those related to literacy skills. The learners may rely on their previous languages in many other ways (e.g. managing learning processes, generating and organising ideas). A review of the studies provides considerable evidence that bilinguals through additional language acquisition/learning experience develop some other skills not emerging from literacy. Some of these skills are enhanced language processing strategies (McLaughlin & Nayak, 1989), communicative skills (Cenoz & Valencia, 1994; Baker & Jones 1998), and advanced cognitive operations (Lambert, 1981, 2000), that are hypothesised to exert a positive effect on additional language acquisition/learning. Confirmation also comes from studies carried out by Ianco-Worrall (1972) and Ben-Zeev (1977), who carried out their experiment among the pre-school bilingual vs. monolingual children who were not literate in their languages.

Contrary to what Sanz claims concerning the significance of biliteracy rather than bilinguality, some commentators have arrived at different conclusions when other variables are included in studies of bilinguality.

In an investigation on the effects of bilinguality on third language learning, Errasti (2003) compared two groups of bilinguals (N= 155) who differed in terms of their competence in both languages as well as their language use patterns. The language use patterns distinguished between the students who used their languages in all social contexts, with
their family members, and at school, as opposed to those who merely used one language in their interpersonal communication. Errasti examined the language use patterns of the bilinguals to find its relation to proficiency in third language writing. The results showed that all the adolescents were highly competent in Basque and Spanish but that it was the students, who used Basque in more language domains who had the best scores in written production in English.

Errasti (2003: 39) concludes: "the use of Basque, a minority language in the Basque country contributes to a higher level of competence in that language". What becomes clear from Errasti's conclusion is that, as Olshtain, Shoamy, Kemp, and Chatow (1990) maintain, both the formal organization of language (the speaker's linguistic competence) and the appropriateness rules related to language use are acquired mainly through social interaction not simply from instruction. So, one could come to the conclusion that, contrary to what Sanz posits, social factors are as important as educational factors when it comes to understanding bilingual development and its outcomes in contexts with two languages.

However, Errasti fails to illustrate how the bilingual competence of the participants was assessed. This concept, namely, assessing the competence of the subjects under investigation, should have been very clearly identified, since it is an important variable in Errasti's investigation.

Similar to Errasti, Wagner, Spratt, and Ezzaki (1989) suggest that the application of the conclusions reached by a number of scholars (e.g. Sanz, 2000) may not be applied to all contexts. In other words, Wagner and his colleagues reported that the positive role played by literacy in the first language in achievement relative to that of literacy in the second language may not be justified on all occasions.
Contrary to what Sanz concludes from the study carried out in a Catalan context, Wagner and his colleagues (1989) report contradictory results in their study conducted in a Moroccan context, where a group of children did not have literacy in their first language (Berber), but developed literacy in their second language (Arabic), as compared with those in another group, who achieved literacy in their first language. In this study, 166 participants came from two linguistic communities (Arab and Berber), but lived in the same village, attended the same school and received literacy instruction in Arabic (a second language for Berbers) and subsequently French (a third language for Berbers). In their study, Wagner et al. considered a number of background variables that might have influenced learning to read, such as pre-schooling in Arabic, parental literacy, gender and SES. Their analysis of the results showed that learning to read in French as an L2/L3 was unrelated to an Arabic or a Berber linguistic background, therefore suggesting “a serious reconsideration of the notion that first language literacy is always best in the light of specific contexts of language use and literacy acquisition” (Wagner et al., 1989: 46). They mention that the Moroccan context, and many others like those in Asia, where people have opportunities to acquire the second language outside the classroom, are distinguished from other multilingual, African countries, where the national/official languages may be spoken only in school and official contexts. The findings of Wagner et al. provide counterevidence to the suggestion made by Cummins’ Interdependence Hypothesis.

In an attempt to expand the scope of investigation on the role of bilingualism in the third language use, Safont (2003) tried to ascertain the effect of bilingualism on third language learner’s pragmatic production and metapragmatic awareness with a focus on request acts linguistic formulations (e.g. to face the subjects with gradations of linguistic formulations
on the basis of politeness criteria and asking them to compare the similarities and
dissimilarities of these expressions with the ones in their native language). Regarding
pragmatic formulations, Safont analysed the use of request formulae by 80 monolingual
(Castilian) and 80 bilingual (Catalan and Castilian) female learners of English as a
foreign language in a discourse completion test and role-play task. Safont also contrasted
participants’ responses to a discourse evaluation test in determining their degree of
metapragmatic awareness. Results from the analysis pointed to the advantage of
bilinguals over monolinguals in justifying their evaluation on the appropriateness of
certain request strategies to particular contexts, as well as on their use of request
realizations. Safont relates these positive findings to developed interactional competence,
a highly developed ability to communicate and interpret communication among bilinguals
and dynamic view of multilingualism.

Another study that provides evidence from an Iranian context concerning the positive
effects of bilinguality on achievement, though limited only to vocabulary achievement in
English as an L3, is the one carried out by Keshavarz and Astaneh (2004). Keshavarz and
Astaneh investigated the influence of the bilinguality of 60 Azeri Turkish-Persian and
Armenian-Persian bilingual subjects on vocabulary achievement. They compared the two
bilingual groups with a monolingual group (N=30) of Persian speakers, in terms of their
performance on the Controlled Productive Ability Vocabulary Test (CPAT). The results
showed that native speakers of Azeri Turkish and Armenian who used Persian as their
second language performed better in the English vocabulary test than did the Persian
to the positive effect of the subjects’ bilinguality on their third language vocabulary
achievement. Their study also revealed that in the area of vocabulary production and
achievement the Armenian-Persian bilinguals were more successful than the Azeri Turkish-Persian monolinguals. The researchers' reasoning for this finding was that the Armenian-Persian bilinguals had learned their first and second language both academically and orally contrary to the Azeri Turkish-Persian bilinguals who had acquired their first language orally.

However, Keshavarz and Astaneh did not take into account some of the factors that may have had a bearing on their results. These factors are briefly stated below:

- In this study, the participants' profiles indicate that Keshavarz and Astaneh have not accounted for the learners' previous exposure to English language as well as their motivation. The role of religious ties among Armenians should not be overlooked in terms of comparison. Armenian students may be more motivated to learn English.

- Two groups of bilinguals (Armenian-Persian and Azeri Turkish-Persian) who come from two distinct language family backgrounds are investigated. Therefore, language typology could have a major effect on the outcomes, because Armenian, Persian and English are all descendants from the same language family, i.e. Indo-European language family unlike the Azeri Turkish language, which is a Turkic descendant from the Altaic language family.

In a recent study in a Malaysian context, Nor-Azmi (2004) did a similar experiment to those outlined above on 119 Malay secondary school students. They were Malay-English bilinguals who were dominant in the Malay language. A majority of the subjects in this study spoke more Malay than English in their everyday lives. And, they had better expressive and receptive language ability in Malay than in English. In order to determine
the degree of bilingualism among the respondents, Nor-Azmi used a background questionnaire as a rating scale in terms of respondents’ language usage. In addition, he controlled some external factors like socio-economic status, gender and motivation.

The findings of his study indicate that even though the students spoke more Malay than English in their daily lives, those who spoke (expressive) and heard (receptive) more and better English than the others (more bilingual) tended to be more intelligent, with respect to cognitive abilities, such as analogical reasoning, mental categorising, and sequencing. He also reports that being bilingual does have an influence in helping a Malay student to get a good grade in his English test, but it does not seem to have the same influence in helping him to achieve better overall academic results in a standardized, national-level examination.

Nor-Azmi concludes that being bilingual may further enhance the cognitive processing ability of an individual. He also attributes the bilinguals’ good performance in English to be construed as a natural effect of being more proficient in two languages.

Overall, studies on the possible effects of bilinguality on third language acquisition/learning conducted in different contexts tend to associate bilinguality mostly with advantages. However, not every research study has ended in positive findings in favor of bilinguals. Some of the studies that provide counterevidence to the findings reported above are briefly explained below:

Magiste (1984) surveyed an extensive investigation carried out by the National Swedish Board of Education concerning the acquisition of a third language in a Swedish context.
This study compared the level of proficiency in English attained by native speakers of Swedish and a group of immigrants who were bilingual in Swedish and another language. The findings of this study were based on results from a standardised test in English. Some other factors including parental education, the language used by the students and their parents at home and time of immigration were also accounted for. The general results indicated there were no differences between the groups. However, this investigation revealed a new and interesting effect. The results from passive bilinguals in general proficiency were slightly higher, but there was no indication of whether these differences were statistically significant or not.

In a longitudinal study Van Gelderen, Schoonen, De Glopper, Hulstijn, Snellings, Simis, and Stevenson (2003) analyzed the relationship between L3 reading comprehension in English of bilingual Dutch students compared to monolingual Dutch students for whom English was a second language. They decomposed reading comprehension proficiency into three types of components: linguistic knowledge (vocabulary and grammar), speed of processing linguistic knowledge (lexical access and sentence comprehension), and metacognitive knowledge of text characteristics and strategies for reading and writing. Participants were 13/14 secondary school students divided into two groups of bilingual Dutch speakers for whom Dutch was introduced at school as the national language while they spoke another native language at home not widely used outside home (e.g. Sranan Tongo, Berber, Arabic, or Turkish) and monolingual speakers of Dutch. Van Gelderen et al used various tests including many items on the componential skills of reading comprehension. In contrast to suggestions made by other researchers like Thomas (1988) and Cenoz & Valencia (1994), they reported that Bilingual Dutch group’s reading comprehension of English was not superior to that of the monolingual Dutch group. They
found no significant differences between the two groups' reading comprehension and its constituent skills.

However, there are some important variables that Van Gelderen and his colleagues did not control in this study. These variables include students' socioeconomic situation, which might have influenced their school success. Furthermore, they did not account for the linguistic gap between the L1-L3 of their bilingual group that was bigger compared with that of the L1-L2 for the monolinguals. The target language, English, in this study is closer to Dutch than to the first languages (e.g. Sranan Tongo, Berber, Arabic, or Turkish) of the L3 readers. Besides, there is no indication of the degree of knowledge and the language use patterns of bilingual speakers as far as their first language is concerned. These factors may significantly have a bearing on their findings.

A close examination of the relevant literature leads one to the conclusion that psycholinguists, including Lambert (1981), Cook (1992), Verhoeven & De Jong (1992), and have been trying to make a link between language, cognition, and thought. With regard to the relevance of cognitive studies to language learning, Lambert (1981: 9-10) asserts, "We view language as one aspect of cognition, inextricably tied to thought, the features that very likely determine the depth and breadth of language competence". Therefore, a brief review of the aspects related to cognitive development, particularly, those aspects linked to language learning seem to be of relevance. Research and some theories on cognitive aspects of language outlined in the present study are considered to be of relevance to the exploration of bilingual competence. First, it draws our attention to a number of variables which come into play in language learning/acquisition processes, and provides an indication that there are various factors which can be decisive in
determining the resulting bilingual competence at different times or ages. Second, according to Rayner (1989), a thorough understanding of these subcomponents will help us to put them to describe the “big picture”. Overall, many scholars, such as Lambert (1980, 2000), Cummins (1991, 2000), Baker (1993, 2001), and Jessner (1996) definitely talk about an increased tendency in applied linguistics to acknowledge that language comprehension is affected by cognitive abilities (e.g. communicative sensibility, creativity and metalinguistic awareness in language learning).

2.6 Bilinguality and Cognitive Development

Most studies on the positive effects of bilinguality on additional language acquisition, according to Cenoz (2003: 81), “relate the advantages presented by bilinguals to the influence of bilingualism on cognitive development (e.g. concept formation, creativity) and specifically to metalinguistic awareness”. It is hypothesized that cognitive advantages occur as a consequence of bilingual experience (Cummins, 1976, Verhoeven & Vermeer, 1992). In this case, an indirect effect of bilinguality is taken into account, i.e. bilinguality affects cognitive aspects of language learning, particularly metalinguistic awareness, and these, in turn, affect additional language acquisition/learning. If we accept the viewpoint that language development and cognitive growth are interrelated, and that this interrelationship makes bilinguals different from monolinguals, we need to find out how and to what extent they are different. One should understand what occurs when two different languages are present around a bilingual individual. And, how it affects their language-related cognitive functioning.

Mohanty (1994) proposes a sequence of stages from language differentiation to the development of code-switching rules through which an individual developing language in
a bilingual environment is likely to pass. One’s development passing through these stages, as Mohanty implies, makes the experience of bilingual development unique compared to the monolingual experience. But how does this bi-linguistic development influence the individual’s cognitive development? In other words, the question is whether the processing of two languages has any effects on mental processing.

A widely accepted discussion on the relation between bilinguality and cognitive aspects of learning is the one held by Vygotsky (1962) on general theoretical views on language development and its relation to cognitive development. For him, language plays an essential role in cognitive development, at least, from the time the individual has attained a certain level of language competence. He believes that language, first developed as a means of social communication, is later internalised and becomes a crucial tool in the shaping of cognitive processes, which will enable the individual to organise thought. Vygotsky (1962: 10) states:

Being able to express the same thought in different languages will enable the individual to see his language as one particular system among many, to view its phenomena under more general categories, and this leads to awareness of his linguistic operations. This awareness further generalizes to other areas of concept learning and thinking.

For Vygotsky, the evolution of cognitive growth and experiencing with more than one language has different consequences for the development of cognitive abilities. He further insists on the role of metalinguistic skills, namely on the control and self-regulation of cognitive processes induced by the use of more than one language.

In line with Vygotsky, Cook (1997) reminds the reader of a prevalent view in education. Cook suggests that the L1 processing of L2 users may become richer, their mental
processes more effective or their view of the world more balanced than of those who only know one language. Cook, of course, makes a difference between the L2 learner and the L2 user in that the latter is preferred as being a more encompassing category than the first one, because it includes people who have finished learning, while, the L2 learners are those still in the process.

Arguments on advanced cognitive functioning among bilinguals have particularly focused on metalinguistic awareness as the most characteristic cognitive ability. Metalinguistic awareness facilitates the acquisition/learning of language by exploiting the cognitive mechanisms underlying the processes of transfer and enhancement. These arguments are indications of the fact that bilinguals may develop a more analytical orientation to language through organising their two language systems. An analysis of the relationship between metalinguistic awareness and language acquisition/learning, can, therefore, prove very helpful in understanding the cognitive processes involvement in acquisition of additional languages.

2.6.1 Bilinguality and Metalinguistic Awareness

Metalinguistic awareness is a psychological factor that may affect the linguistic performance of bilinguals in the process of additional language learning. Metalinguistic awareness is knowledge about the nature of language, which is an asset regarded as an outcome of experience with more than one language. Cook (1997) explains metalinguistic awareness as the ability to play with language, as one of the features typical of a multilingual’s cognitive style in contrast to most monolinguals. Herdina & Jessner (2002) categorise metalinguistic activities as a sub-field of metacognition concerned with language and its use that comprises: (1) activities on reflection on language and its use and (2) subject’s ability intentionally to monitor and plan their own methods of linguistic
processing in both comprehension and production. They regard metalinguistic awareness as closely linked to the idea of monitoring in SLA, which is “defined as the part of the learner’s system that consciously inspects and from time to time alters the form of the learner’s production” (Herdina & Jessner, 2002: 63).

There is evidence to suggest that metalinguistic awareness and the language monitor experience a significant development in multilingual systems. This enhancement can increase the potential for facilitation in other learning situations, “since with the increase in the number of the languages involved the functions of the monitor expand” (Clyne, 2003: 211).

In the same vein, Reynolds (1991b) suggests that the necessity for the bilingual to control two language systems improves the efficiency of the ‘meta-componental system’ (for more details on metacognitive and a taxonomy of cognitive strategies please refer to Phakiti, 2003, pages 697-699) of intelligence and their performance in a variety of metacognitive and metalinguistic tasks. The meta-componental system of intelligence, termed the ‘executive processes’ (Clyne, 1997), controls intellectual functioning by constructing plans and monitoring and evaluating information processing; it is responsible for a variety of processes such as understanding, selecting strategies, deciding how to perform them, and keeping track of what has been done and what remains to be done in problem-solving. Reynolds’ point of view is that it is the more efficient use of this meta-componental dimension of intelligence that would give the bilingual knowledge of the structure of both languages. Bialystok (1988: 502) calls the executive process the ‘fluid ability’ that is a key component in language processing. The knowledge of procedures, according to Bialystok, for solving a variety of language problems and the ability to execute those solutions through appropriate attentional focus is the function of control of
linguistic processing. She posits that different language uses require attention to different aspects of the linguistic input. In conversation, for example, control is required to integrate and monitor the ongoing utterances, determining, for example, how pauses will be filled. Learning to read requires much higher levels of control of processing. It requires proper sampling and integration of formal and semantic information. These ‘processing skill components’ and ‘control of attention’ (Bialystok & Majumder, 1998) are two metalinguistic aspects of language learning confirmed to be advanced in various degrees among bilinguals of different levels of proficiency.

With regard to metalinguistic strategies, Clyne (1997) proposes that bilinguals, through developing bilingually, practise a form of contrastive linguistics comparing the syntax and vocabulary of their two languages, and that the necessity of monitoring and controlling two symbol systems leads to increased meta-componential abilities. Such an extended language monitor can be conceived of as having the following significant functions:

(a) Fulfilling the common monitoring functions (e.g. reducing the number of performance errors, correcting misunderstandings, developing and applying conversational analysis); (b) Drawing on common resources in the use of more than one language system; and (c) keeping the systems apart by checking for possible transfer phenomena and eliminating them and thereby fulfilling a separator and a cross-checker function.

(Herdina & Jessner, 2002:64)

It should be highlighted that the advantages mentioned so far do not mean that monolinguals lack metalinguistic awareness. The point is, “they achieve this level a little later than bilinguals and that bilinguals are more developed than monolinguals” (Bialystok, 1988: 508).
Cummins (1976) reviews some hypotheses that have been put forward to explain the positive association between bilinguality and cognitive functioning. These are outlined as the 'experiential enrichment' hypothesis, and the 'switching hypothesis'.

2.6.2 Experiential Enrichment Hypothesis

The 'experiential enrichment' hypothesis holds that the bilingual individual may have been exposed to a wider range of experiences that may stem from two cultures. Diaz (1985) assumes that language is certainly much more than an arbitrary set of symbols arranged according to grammatical rules. Above all, language is the most important vehicle of human communication and, as such, contains the history of living experiences of a given speech community and culture. At the very heart of bilingualism, there is a bicultural experience. By learning a second language, the bilingual individual is exposed to the perceptions and awareness of a different culture. The bilingual-bicultural individual can experience the world from two different perspectives. Diaz (1985) believes that this possibility (two worlds of experience) touches a central process of cognitive development among bilingual individuals.

Likewise, concerning the additive aspects of bilinguality in terms of experiencing additional language, Malakoff (1992), Clyne (1997), and Cook (1997) highlight the fact that a person who has two languages has access to a range of situations and experiences that are not available to the monolingual, whether these are the minimal possibilities conferred by two years or maximal possibilities.

A similar hypothesis, 'experiential subtheory', is presented by Clyne (1997) that describes the hypothetical internal processes involved in learning two languages. Clyne
believes that bilinguals may be at a general linguistic advantage, because they have adapted to the novelty of dealing with two code systems. “This will allow easier automatization in dealing with linguistic tasks, as well; the acquired automatization allows the bilingual extra resources to deal with new linguistic tasks” (Clyne, 1997:168). According to McLaughlin & Nayak (1989) mastery of complex tasks requires integration of two types of operations. Some subtasks (controlled) require attention and time and need a relatively large amount of processing capacity, while others (automatic) require little attention, proceed automatically and demand little processing and energy. In information processing learning is regulated by controlled processes. The expert has learned and routinized complex skills that have become automatic after the earlier use of controlled processes. The novice, on the other hand, needs to master elementary subtasks to free controlled processing for higher-level tasks.

2.6.3 The Switching Hypothesis

The ‘switching hypothesis’, which is consistent with code-switching theory, has been proposed to account for the findings that bilinguals exhibit higher levels of cognitive flexibility or divergent thinking. This hypothesis proposes that bilinguals develop a more flexible learning set as a result of switching between languages and making use of two different perspectives. In other words, bilinguals are able to move rather easily from verbal production in one language to that in another language that may have added flexibility (Lee, 1996). In Malakoff’s (1992) point of view for the bilingual, linguistic experience spread over two languages is encoded in either of languages and can be expressed in both languages. Therefore, a bilingual can easily transfer the information between the two languages. In other words, what makes a distinction between bilinguals and their monolingual peers is: (a) their ability to put cultural forms together; (b) that they
are aware of the fact that their language is only one of several possible modes; (c) that the mode of communication involves the understanding of what a speaker intends to communicate; and (d) that there are others with different communicative conventions and standards of evaluation. The ‘contextual subtheory’ that Clyne (1997) proposes seems to correspond to the notion of the switching hypothesis. Clyne comments positively about bilinguals’ extensive experience in dealing with separate linguistic and often social contexts. He believes that they should be more experienced in adapting their behaviours to fit the needs of varying linguistic and cultural milieus. Thus, one can assume that the actual process of switching between languages is beneficial to cognitive functioning and flexible thinking. This is due to the fact that each language may provide the speaker with distinct perspectives (Hoffmann, 1991). Moreover, it is possible that relevant aspects of problem situations may be brought to the bilingual’s attention by the availability of two different linguistic perspectives (Cummins, 1976). These hypotheses seem plausible in general terms, but there is need for empirical evidence for or against them.

The models, hypotheses, and the concepts on the association between bilinguality and additional language learning presented so far may help us understand how bilinguals actively process linguistic information into coherent systems of knowledge. Emerging from these models and theories may be a discussion of the studies that deal with the cognitive aspects of language learning, especially metalinguistic awareness summarized in the following section.

2.6.4 Studies on the Cognitive Consequences of Bilingualism

Hoffmann (1991) divides empirical research on the cognitive consequences of bilingual development into two periods. The studies, mainly psychometric ones conducted before
the 1960s in which negative consequences are more frequently reported than positive ones. The second is the period from the 1960s onwards in which studies demonstrate positive effects and by far outnumber research, which mentions negative effects. An important turning point (Lambert, 1981; Bialystok, 1988; Hamers & Blanc, 2000; Cenoz, 2003) came in 1962 with the publication of a study by Peal and Lambert.

Skutnabb-Kangas (1981) calls attention to the idea that early studies on the relationship between bilinguality and cognitive development were often attempts to investigate why bilinguals did badly at school. They were undertaken in order to demonstrate the negative consequences of bilingual development and supported the idea that bilinguals suffered from academic retardation, had a lower IQ, and were socially maladjusted compared with monolinguals.

Cummins (1986) explains in detail the prejudice against bilingualism which existed in the first period on the studies on bilingualism. At that time, most teachers of minority language children saw bilingualism almost as a disease, which, not only caused confusion in children’s thinking, but also prevented them from becoming good Americans or good Canadians. Therefore, they felt that a precondition for teaching children the school language was the eradication of their bilinguality. Thus, children were often punished for speaking their L1 in school and were made to feel ashamed of their own language and cultural background. It is, therefore, not surprising that research studies conducted during this period often found that bilinguals did poorly at school.

Hamers & Blanc (2000: 87) make a number of methodological criticisms to be levelled at these early psychometric studies:
• Bilingual subjects were often not comparable with monolingual controls in terms of socio-economic background and proficiency in the language of testing;
• Bilinguals were often selected on the basis of coming from an immigrant home, having a foreign last name or speaking a foreign language at home;
• The very notion of bilinguality was not adequately defined and tests were often administered in the subjects' weaker language.

At the opposite extreme, Peal and Lambert's (1962) investigation drew attention to the widely known perception that under certain circumstances bilinguals can be tremendously advantaged over matched monolinguals, not only in terms of language competences, but also in terms of cognitive and social development. This is clearly stated in most recent studies.

Peal & Lambert (1962) brought about a revolution in the field of bilingualism by a delicate research study. They conducted comparisons between English-French bilinguals in Montreal with their monolingual counterparts in each language in order to pinpoint the intellectual components of the bilingual deficit. In contrast with earlier research, great care was taken in their methodological design. Although, some of these methodological aspects have been criticized, "this study triggered off a large number of better controlled studies on the effects of bilingualism" (Cenoz, 2003: 73).

In addition to matching the groups for age, and sex, the authors also controlled for language proficiency. They calculated a balance score on the basis of tests of vocabulary and association as well as on the basis of a self-evaluation scale in the two languages. The findings of the study indicated that the bilingual group scored significantly higher than the monolingual controls for most of the measures. Bilinguals scored higher than the
monolinguals on tests of verbal and non-verbal intelligence. They were further advanced in academic school grades than were the monolinguals. They performed as well as or better on various tests of linguistic competence on French than did the monolingual controls at the same time that they outperformed the controls on all tests of competence in English. In his report on this investigation Lambert (1981: 10) says:

The bilinguals’ patterns of test results indicated that they relative to monolinguals, had developed more diversified structure of intelligence and more flexibility in thought, those very features of cognition that very likely determine the depth and breadth of language competence.

Lanco-Worrall (1972) designed her experiment to test the separation of sound from word meaning by bilinguals compared to matched monolinguals. She studied 30 children, bilingual in an African language and English. Each bilingual was matched with two monolinguals, one African and one English, with respect to age, sex, and intelligence. The bilinguals did much better than the monolinguals in tests for sensitivity to the semantic properties of words (by contrast, for instance, to interpreting similarities between words in terms of their acoustic properties). Bilinguals were also more aware of the arbitrary nature of words when they were asked to decide whether something could be called by another name. Lanco-Worrall attributes this superiority of bilinguals to their enhanced metalinguistic abilities. She came to the conclusion that her bilinguals were some two years more advanced in this metalinguistic feature of cognitive development.

Ben-Zeev (1977) assumes that this greater awareness and a more intensive analytical ability towards language, which Lambert (1981) categorizes as a function of cognitive flexibility, develops as a consequence of bilinguals’ attempts to keep their two languages
apart, to avoid interference. She studied 98 Hebrew/English middle-class individuals with their 188 Spanish/English low SES peers, again with age, sex, SES and IQ controlled. The bilinguals did better than monolinguals at different kinds of language games involving substituting words for other words and answering questions but preserving the meaning of the old word. Ben-Zeev has put forward the hypothesis that bilinguals develop a strategy for analyzing the linguistic input, which enables them to overcome the potential interference arising from a bilingual environment.

She distinguishes four mechanisms for resolving interference at the structural level of language:

(1) a greater capacity for language analysis; (2) sensitivity to feedback cues from surface linguistic structure and/or verbal and situational context; (3) maximization of structural differences between languages; and (4) neutralization of structure within a language.

(Ben Zeev, 1977:31)

Ben-Zeev's assumption behind all four mechanisms is that the primary effect of bilingualism is on language learning and processing strategies, and that it is through this channel that bilingualism may affect general thought processes. In other words, these four mechanisms, developed in the first place to respond to a bilingual environment, are generalized to other information-processing tasks and, thus, benefit the overall awareness of the individual.

The research findings outlined above are in line with Cummins and Swain (1986) who investigated the effects of bilingualism on the development of individuals' awareness of

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10 Examples of this overall sensitivity involve an ability to interpret facial expression, gestures, intonation, and situations (Skutnabb-Kangas, 1982).
certain properties of language and on their ability to analyze linguistic input. They matched their subjects on IQ, SES, sex, and age and designed to assess bilinguals' ability to examine language in an objective manner, apart from objects and events to which it refers. The outcome of the study was that the bilinguals showed a significantly greater awareness of the arbitrary nature of word-referent relationships and were also better able to evaluate non-empirical contradictory statements.

In her investigation of metalinguistic awareness in second and third language learning, Thomas (1992) included a theoretical discussion of the nature of linguistic knowledge and of the advantages bilinguals are thought to possess in terms of metalinguistic awareness. The participants in her study were 32 students registered for beginning and intermediate French classes. Of the total 19 students were monolingual English speakers with no formal exposure to another language, learning French as a second language. The remaining 13 students (6 with formal instruction in Spanish at least two years, and 7 with no formal instruction in Spanish) comprised those students who had grown up in a bilingual home. The participants were assessed in terms of their beliefs about the nature of communicative competence and the amount of time that should ideally be assigned to communicative and metalinguistic language learning activities in the perfect foreign language-learning classroom.

The findings of Thomas's investigation implied that bilingual students assigned more importance to knowledge of strategies to get around their limitations than did their monolingual counterparts. Thomas (1992: 539) believes: "The prior experience of Spanish speaking students seems to have made a difference in what they think it means to be able to communicate in a foreign language". Furthermore, she hypothesizes that the
bilinguals have developed awareness that knowledge of such strategies is a component of communicative competence.

In a diglossic context, Eviatar & Ibrahim (2000) based their research on the continuum between the dialects of a single language, diglossic situation, and bilingualism. Their goal was to investigate how the degree of difference between the linguistic systems individuals use affects metalinguistic awareness. They compared a group of monolingual Hebrew speakers with two groups of bilinguals: immigrants with Russian as their home language (born in Israel) and those whose native language was Arabic and had not been systematically exposed to any other language. They posed this question: Would exposure to literary Arabic, in addition to their native spoken Arabic, result in the Arabs developing sensitivity to language or their performance on tests of metalinguistic abilities? They looked for the differential effects of literacy, and language experience. The results of their study of 116 individuals' metalinguistic skills and vocabulary measures suggested that preliterate and literate Arab children functioned as Russian bilinguals. Therefore, as they expected the bilinguals in this diglossic context performed at higher levels in the metalinguistic tests as compared to monolinguals. Eviatar and Ibrahim propose that this superiority is the result of having to deal with two forms of the Arabic language.

In another study, Lasagabaster (2000) focuses on the facilitating role on achievement in a third language that formal education in the two languages has rather than the influence of bilingualism per se. He planned his study to find a relationship between language learning and the development of metalinguistic awareness. Lasagabaster selected 352 students with different levels of proficiency in both their languages, namely, balanced bilinguals, dominant bilinguals and semilinguals from three linguistic models existing in the educational system in the Basque context (for more details of the linguistic models see
Lasagabaster, 2000:106). He measured the metalinguistic awareness of the participants through Pinto’s (1995) TAM: test of metalinguistic awareness while including the effects of some other independent variables (e.g. cognitive ability and background information). What he believed from his review of several studies on the development of metalinguistic awareness was that early exposure to a second language is one of the factors or activities that promotes metalinguistic activity. As he expected, the results of his study did not reveal any difference between balanced and non-balanced bilinguals in terms of their metalinguistic awareness scores.

The studies reviewed so far demonstrate no difference among the bilinguals with varying degrees of bilinguality and literacy. A possible interpretation that emerges from these findings relates to Bialystok’s (1988) view on the link between the level of bilingual competence attained and metalinguistic awareness. Bialystok maintains that metalinguistic awareness develops at an early stage of bilinguality, therefore, different levels of metalinguistic awareness correspond with various degrees of bilinguality.

On the other hand, this study reveals contrary to Cummins (1987), Ricciardelli, (1992), and Sanz (2000), that metalinguistic awareness can not be considered an outcome of biliteracy or full/balanced bilingualism, rather it is the result of contact with two language systems at early stages of language learning (Yelland, Pollard, & Mercuri, 1993, Eviatar & Ibrahim, 2000), and even before the onset of literacy (Campbell & Sais, 1995). Partrigde (1994) remarks that metalinguistic awareness is one of the common factors underlying both L2 learning and literacy learning. However, one should not underestimate the stronger part that metalinguistic awareness plays in the development of cognitive literacy skills compared to the other skills.
In their study of 120 Swedish monolinguals compared to their Persian-Swedish bilinguals, Kormi-Nouri et al. (2003) tried to explore the link between memory and bilinguality. In this study the subjects in three age groups (mean ages 8.5, 10.5 and 12.5 years) were compared on episodic memory and semantic memory tasks. Episodic memory was assessed using subject-performed tasks (with real or imaginary objects) and verbal tasks, with retrieval by both free recall and cued recall. They assessed semantic memory by word fluency tests. They found out that bilinguals dominant in academic skills in Swedish and fluent in conversational skills in their home language, Persian, performed better than monolinguals. Their findings also indicated that the positive effects of bilinguality on both episodic memory and semantic memory extend to all age levels. Kormi-Nouri and his colleagues conclude that bilinguals integrate and/or organize the information of two languages, and so bilinguality creates advantages in terms of cognitive abilities (including memory). They suggest that these positive effects can be true for children’s long-term memory.

The findings of Kormi-Nouri et al. may highlight the strong association between memory as a cognitive aspect of language learning, and the information processing skills involved in language learning activities such as listening comprehension and reading comprehension.

All these reviews from the related literature on the phenomenon of bilingualism suggest that bilinguals might call to a different extent on strategies of analysis and control in language processing as compared by their monolingual peers. However, it does not mean that being a bilingual is always accompanied with positive outcomes. As has been
repeatedly mentioned on several occasions in the literature reviewed, only in certain circumstances may bilinguality be advantageous. Being a multilingual does have a number of drawbacks; however, they have little to do with the disadvantages suggested by early researchers (Hakuta, 1986). Some of these disadvantages are listed below:

- Maintaining two languages can sometimes cause pressure on the individual, even if one has known them both from childhood.
- Problems in cultural identity (anomie): Occasionally, individuals can feel confused about who they are. Some bilinguals may feel uncomfortable moving between two identities.
- Interference may be considered as an inevitable outcome of having contact with languages already established. In other words, the potential interference arising from a bilingual environment should not be overlooked even though it is suggested that bilinguals develop an analytic strategy of linguistic processing in order to overcome Interlingual interference. Furthermore, this aspect may not be applicable to the present study, because it is believed that the ability to keep languages separated may be enhanced if the languages in question are written in different orthographies (Romaine, 1995) such as Persian and English.

2.7 The Concept of Language Proficiency

An important dependent variable, which is to be assessed for comparison purposes, is the additional language proficiency attained by the subjects during the investigation. As a first step in assessing language proficiency, one should make clear what he/she means by language proficiency and what it encompasses. The nature and the elements of language proficiency have long been debated among practitioners. This debate emerges from the
fact that researchers have differently understood the nature of language proficiency. Canale (1984) suggests that there is less agreement on the content and boundaries of this underlying competence and, hence, on what should be measured by language proficiency tests. A review of the literature on the concept of language proficiency reveals that: “A pendular movement characterizes this debate” (Schils & Weltens, 1992: 175). The categorisations assigned to the concept of language proficiency go from models incorporating a large number of factors consisting of 64 separate language components (Burt, Dulay, and Hernandez-Chavez, 1975) to the other extreme of definitions i.e. one global factor like that of Oller’s (1979) ‘Unitary Competence Hypothesis’. Hence, as Cummins (1984) proposes, the obvious variation in language tests is not surprising. As far as the scope of this investigation is involved, a few wide-ranging definitions are very briefly presented, so that one can adhere to one of these definitions for the purposes of this investigation.

Regarding language proficiency, Chomsky’s (1965) theory of ‘Linguistic Competence’ is one of the concepts that one often comes across in the literature on language proficiency. Chomsky’s linguistic theory is concerned primarily with an ideal speaker-listener, who knows his language perfectly, and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors in applying his knowledge of the language in actual performance. A dichotomous distinction is, hence, made between ‘Competence’, as the speaker-hearer’s knowledge of language, including all linguistic aspects of meaning, and ‘Performance’ referring to the ability to use linguistic knowledge along with the conceptual system to achieve certain language purposes.
Oller (1979) identifies the components of language proficiency as underlying abilities, knowledge systems, and skills. He argues that there exists a global language proficiency factor, namely, Unitary Competence, that has exerted influence on various testing procedures. However, it has been replaced by more wide-ranging models like that of Canale & Swain (1980) and Bachman (1990). The main components of these models are presented as follows:

Canale and Swain (1980)

- **Grammatical competence**: mastery of the language code (e.g. lexical items and rules of word formation, sentence formation, literal meaning, pronunciation, and spelling).
- **Sociolinguistic competence**: mastery of appropriate use and understanding of language in different sociolinguistic contexts, with emphasis on appropriateness of both meanings (e.g. topics, functions) and forms (e.g. register).
- **Discourse competence**: mastery of how to combine and interpret meanings and forms to achieve unified text in different genres (e.g. casual conversation or an argumentative essay)
- **Strategic competence**: mastery of verbal and nonverbal strategies both (a) to compensate for breakdowns in communication due to insufficient competence or to performance limitations (e.g. use of paraphrase), and (b) to enhance the rhetorical effect of utterances (e.g. use of slow, soft speech).

The model presented by Canale and Swain (1980) has been replaced finally by Bachman's (1990) model that has the following general structure presented in Table 2.2.
### Table 2.2 Model of Language Proficiency (Bachman, 1990)

<table>
<thead>
<tr>
<th>Trait Factors: Competences</th>
<th>Language Competence</th>
<th>Pragmatic Competence</th>
<th>Strategic Competence</th>
<th>Skill Factors</th>
<th>Method Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Organisational Competence</td>
<td>• Illocutionary (Language Functions)</td>
<td>• Assessment</td>
<td>• Psycho-physiological Mechanisms</td>
<td>• Language use situation</td>
</tr>
<tr>
<td></td>
<td>• Grammatical (Lexis, Morphology, Syntax)</td>
<td>• Sociolinguistic (Register, Dialect, Figurative Language, Cultural Allusions, Naturalness)</td>
<td>• Planning</td>
<td>• Mode (Receptive/Productive)</td>
<td>• Amount of context</td>
</tr>
<tr>
<td></td>
<td>• Textual (Written and Oral Cohesion; Rhetorical Organisation)</td>
<td></td>
<td>• Execution</td>
<td>• Channel (Oral/Aural; Visual)</td>
<td>• Distribution of information Type of information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Response Mode</td>
</tr>
</tbody>
</table>

In the United States, The Council of Chief State School Officers' (CCSSO) model of language proficiency, on the other hand, focuses on the students' ability to function in the four language skills of reading, listening, writing and speaking and the need to assess each of these four skills in the following way:

- **Reading**: the ability to comprehend and interpret text;
- **Listening**: the ability to understand the language of the teacher and instruction, comprehend and extract information, and follow the instructional discourse through which teachers provide information;
• **Writing**: the ability to produce written text with content and format fulfilling classroom assignments;
• **Speaking**: the ability to use oral language appropriately and effectively in learning activities within the classroom and in social interactions.

Finally, with regard to research on bilingualism and bilingual education, Cummins (1979) makes a distinction between the components of language proficiency by introducing 'cognitive/academic language proficiency' (CALP) and 'basic interpersonal skills' (BICS), explained in detail in the previous sections. As previously mentioned, the former are general cognitively demanding academic skills, such as the range of vocabulary and the knowledge of complex syntax. The latter skills, on the other hand, are closely related to the use of language in interpersonal communication that are mainly less demanding as opposed to those in the first category. Cummins has attempted to conceptualize language proficiency to make the interrelationship between academic achievement and language proficiency across the languages one knows fully understood. Cummins' classification is mostly applied in relation to the development of academic skills in bilingual education and may not be relevant to every context.

As stated earlier, one needs to adhere to one of these definitions in order to plan investigating language proficiency as an important dependent variable. A closer examination of each of these educationally-driven definitions of language proficiency implies that they share, at least, one essential feature. Each definition contains the four linguistic modalities: speaking, listening, reading and writing. In the meantime, one should bear in mind that different methodologies may prove useful and important in investigating language proficiency. This may be decided based on the groups' learning experience, since different groups of learners have different arrays of language learning
experiences. This is reflected in many pieces of writing like that of Vecchio & Guerrero (1995), and Harley, Patrick, Cummins, Swain (2000) who believe that an English proficiency test should utilise testing procedures that replicate, as nearly as possible, the kinds of contextualised language processing that is used in mainstream English speaking classrooms. Accordingly, the model of language proficiency proposed by the CCSSO seems to be a reasonable definition to be adhered to as a framework for the measurement purposes in this investigation for two reasons:

- Instruction of the four main traits of language proficiency separately is characteristic of a typical English language programme, particularly, in the first two years of EFL instruction at the universities in Iran.
- The measurement instrument for assessing language proficiency of the subjects in this study, the First Certificate in English Test (FCE), overlaps basically with the definition proposed by CCSSO.

2.8 Synthesis

Various definitions and typologies of bilingualism, bilinguality, and bilingual individuals outlined in the first section of the present chapter indicated that it would be difficult to define the phenomenon of bilingualism in a concise and all-inclusive way. This is due to the fact that bilingualism is not an absolute concept. It may exist with varying degrees among individuals in different speech communities. Therefore, understanding this phenomenon is dependent on the sociolinguistic context in which it is studied. This means that in studying the phenomenon of bilingualism and the related issues, one should consider it both at individual and societal levels.
On account of the fact that bilingualism involves variation both at individual and social levels, it can be presented as a continuum. An operational understanding of this phenomenon would be, therefore, the ability to communicate in two languages at some (low, intermediate, or advanced) level according to the requirements of the speech community surrounding the individual. Nevertheless, the individual is not necessarily expected to have equal and perfect proficiency in all language skills. Bilinguality entails different degrees of language proficiency that can be evaluated in terms of, at least, the four skills of listening, speaking, reading and writing in the languages one knows. In practice, some of these skills may be less developed than others, because the individuals at various age levels may follow various paths to master and use the two languages in separate parts of the social system. Most bilinguals, for example, acquire one language, L1, normally without formal education during childhood in a natural environment (e.g. from their parents or in the community). They may acquire another language, i.e. a second L1, simultaneous with their first L1 or learn it- the so-called L2- at a later stage mostly in formal settings. It is reasonably natural, then, to come across bilinguals who may use one language for daily conversation and another one for reading or writing. With regard to these situations adult bilinguals would be, hence, expected to have a greater proficiency in two languages than a child.

Therefore, an individual who understands and produces two languages either in the written or the spoken form can be considered a bilingual belonging to a certain category. In other words, he can be placed at either end of the continuum depending on his degree of proficiency in the two languages he knows. However, here, it is necessary to clarify the main difference between being a bilingual and having limited knowledge of a non-native language. The idea of social conditions of language use, i.e. bilingualism at societal level,
plays a substantial role in making this difference between a bilingual and a non-bilingual. Bilinguals mostly learn/acquire their second language for social communication. They may use, at least, some of their language areas, even if not perfect, whereas, a non-bilingual may never use his passive knowledge of a second language. In spite of the difference in their range of language proficiency, bilingual individuals are, thus, functionally bilingual. This ability to function in two languages, apart from the individual, concerns the very important questions that emerge regarding the context of use (i.e. when, where, and with whom people are able to use their languages). The ability to use two languages according to the requirements of the immediate environment of the individual seems to put the bilinguals at an advantage. In other words, by virtue of an additional language at their disposal, bilinguals may benefit from some complex language and cognitive systems (for more details see the Dynamic Model of Multilingualism) that are thought to be of great help when learning additional languages. Hence, it can be concluded that bilinguality of any degree or type deserves to be investigated academically to shed light on the issues related to the link between bilinguality and learning additional languages.

The literature reviewed in various sections of the present chapter implies that research devoted to the multifaceted phenomenon of bilingualism and its possible effects on additional language learning has received wider attention in recent decades. Scholars in various bilingual contexts have investigated this phenomenon from various perspectives. In most of these studies the question frequently posed has been whether learning other language(s), except for the first language, enhances one’s acquisition/learning of a subsequent language. In a few cases, scholars have gone further to investigate if such an
enhancement, if it exists, involves all the language skills. The outcome of such studies has been predominantly positive findings in favour of bilinguals.

To account for such positive consequences of bilinguality, scholars have proposed various theories on the processes involved in language learning and such hypotheses as the Threshold Hypothesis and the Interdependence Hypothesis (Cummins’ 1976, 1979), with regard to bilingual development. This chapter provided a critical assessment of these theories and hypotheses in relation to recent theories. It is suggested that further developments and confirmation emerging from experimental studies are required in various dimensions in terms of these hypotheses.

In addition to the relevant theoretical literature that includes fundamental views on the phenomenon of bilingualism and its possible relation to language learning, this chapter summarised studies on bilinguality and additional language learning both from linguistic and cognitive perspectives. These studies have been conducted under delicately controlled situations, taking most of the affecting factors into account. Nevertheless, a critical analysis of some of these studies raises some methodological issues which, it is suggested to be taken into consideration in future investigations. Although one should attempt to control for such shortcomings, some of them are, in Grosjean’s (2000: 450) terms, “admittedly difficult to resolve at all times”. Yet, one should attempt to consider these issues as much as possible to attain more generalizable outcomes. The methodological issues raised are as follow:

1. Most research on bilingualism focusing on linguistic production or language-related behaviours (for example language proficiency) have not evaluated this trait, as it really
exists. Some of these investigations can be criticised for using only a single measure of language proficiency (e.g. reading comprehension), whereas other aspects of linguistic proficiency might also indicate some other relevant data. In other words, language proficiency is not limited simply to writing skills or reading comprehension, rather it is a combination of, at least, four interrelated skills of listening, reading, writing, and speaking that may affect each other. In studies related to bilinguality, through assessing only one component skill of language proficiency, one cannot attribute the outcomes to all other components. Grosjean (2000:449) suggests, “if researchers use theory tests to see something accurate, they should use their stimuli as they are, not to break them into parts”. The present investigation, accordingly, considers language proficiency not only as a whole unit, but it focuses on the students' ability to function in, at least, the four basic language skills.

2. With the exception of a few studies, it seems that there is a lack of interest in evaluating listening comprehension as one of the most important component skills interrelated with other skills. Previous research fails to provide sufficient data on the listening comprehension ability of learners with various linguistic backgrounds, i.e. how bilingual listeners may process incoming utterances in a new language as compared with monolinguals. Measuring this highly demanding and important skill from various aspects (e.g. word recognition ability/lexical access, auditory memory, listening comprehension proficiency attained at different levels of language learning) may be significantly revealing, particularly when groups with different linguistic backgrounds are involved. Part of this study will examine how bilinguals and monolinguals achieve listening comprehension proficiency at different levels of English language learning.
3. Except for very few cases like that of Errasti (2003) social factors and the language use patterns among bilinguals have not been clearly identified. Exploring the research methodologies of most of the studies makes it evident that the authors have treated language in a vacuum separate from context. The only question that the bilingual subjects were asked in most studies was their proficiency levels in the languages known either through self-rating or by means of some tests. Whereas a pure linguistic approach to two language competences is not sufficient, communication includes not only the structure of language like grammar and vocabulary, but also, who is saying what to whom in which circumstances (Baker, 1993). This limitation may emerge from the fact that even the hypotheses proposed in bilingual programmes (e.g. the Interdependence Hypothesis) seem to overemphasise educational aspects of learning languages rather than social factors (for more details see limitations of the Interdependence Hypothesis).

In this study, in addition to the level of proficiency in the languages known by the subjects, the investigator provides a clear profile of the language use patterns of the bilingual subjects in various social contexts including family, community and peer groups.

4. Bilinguals have been described and assessed in terms of fluency and the balance they have in their two languages. The real bilingual, as stated by Grosjean (1992), has long been one who is equally and fully fluent in two languages (Balanced bilingual). Two questions may come to the mind of the reader.

First, these studies seem to adopt the literal interpretation of balanced bilingual. This implies that by balanced bilinguals the authors mean those who have a reasonable or good competence in both languages. This reminds us of the problem with the definition of
balanced bilinguals: that this balance may exist at a low level of competence in two
languages (Baker, 1993).

The so called balanced bilinguals’ profiles presented in some reports indicate that they are
still learning their second languages, mostly as a school subject, offered 4 to 5 hours a
week in the school environment. In other words, they are in the process of becoming
bilinguals and, using Grosjean’s (1992) terms, they have not reached a more or less
stable\(^{11}\) level of bilinguality. The question is whether they have improved and stabilised
in their second language so that they can be considered bilingual or even balanced
bilingual?

The second problem that emerges from studies on balanced bilinguals, mostly children, is
that all the others that include the majority of those who use two languages in their
everyday lives, particularly adults, are not really seen as bilingual or as special types of
bilinguals. There have been few carefully designed long-term studies on the possible
effects of bilinguality on the acquisition/learning of a foreign language during adulthood
(Galambos & Goldin-Meadow, 1990). The question repeatedly asked, but rarely
answered, is whether the advantages remain with the bilingual throughout their life span.
Hence, this study can be regarded as an original investigation that expands research into a
new cohort, namely, non-balanced adult EFL language learners of English as a third
language.

Given the pitfalls of the previous studies mentioned above and the necessity of analysing
the possible influences of bilinguality on additional language learning in the bilingual
region of Azerbaijan, Iran, this study is planned to find out the possible effects of

\(^{11}\) According to Grosjean (2000) Bilingual language stability is the question of whether one or several languages are still being acquired or restructured or has certain language stability been reached.
bilinguality on learning of English as a foreign language among adult EFL learners. This study will explore the phenomenon of bilingualism from a part of the world where there has been minimal empirical research. It will make use of a naturally occurring situation to advance the field of bilingual research and theory, because it brings evidence from a new sociolinguistic context with a different combination of languages (i.e. Azeri Turkish, Persian, and English).

To the author’s knowledge, no investigation has been conducted into the relationship between bilinguality and its possible effects on the acquisitional processes in an Iranian context, particularly one that tests all component skills including listening comprehension, which has been an overly neglected skill in almost all comparisons. It is expected that differences might be found between bilinguals and monolinguals in terms of their additional language proficiency and academic achievement. This study is established based on the notions expressed through Cummins’ (1976) Threshold hypothesis, which emphasises a stage to be reached by bilinguals in their L1 in order to manifest the effect of their having two linguistic systems in their mind, and the Interdependence Hypothesis (Cummins, 1979) that predicts interdependence of skills across languages. There is no clear prediction, however, concerning any specific area of language proficiency. For this reason this part of the study is principally exploratory.
CHAPTER THREE

RESEARCH METHODS, SUBJECTS’ PROFILES & PROCEDURES

3.1 Introduction

As previously mentioned, the main objective in this study is to explore the question of whether bilingualism influences Iranian EFL learners’ additional language proficiency and their academic achievement. In addition, the researcher intended to find out if bilingualism exerts effects on the four language skills (i.e. listening, reading, speaking and writing) in the same way or differently. The general assumption was that having experienced two previous languages might have some positive effects on English language proficiency and the academic achievement of the Iranian bilingual EFL learners compared to their monolingual peers.

In the previous chapter, several theories and research studies concerning bilingual development and its possible effects on language learning were discussed. Some methodological issues were also raised with regard to the recent research on bilingualism. Following these lines of research findings and the relevant theoretical literature on the outcomes of bilinguality in second language learning, several research questions and hypotheses emerge that need to be systematically analysed. The first section of this chapter encompasses a detailed description of the main research questions and the relevant hypotheses. The second section moves on to the methodological approach undertaken in this investigation. The subjects’ profiles, measurement tools, the procedures and data analyses pursued in data collection are fully described.
3.2 Research Questions and Hypotheses

In this investigation, general language proficiency, the degree of proficiency attained in each language skill and the academic achievement of the subjects were considered as the base line for comparison purposes. Accordingly, the following research questions were formulated:

1. What is the difference between monolingual and bilingual EFL learners in terms of their general language proficiency?
2. What is the difference between monolingual and bilingual EFL learners in terms of their listening comprehension proficiency?
3. What is the difference between monolingual and bilingual EFL learners in terms of their reading comprehension proficiency?
4. What is the difference between monolingual and bilingual EFL learners in terms of their writing proficiency?
5. What is the difference between monolingual and bilingual EFL learners in terms of their speaking proficiency?
6. What is the difference between monolingual and bilingual EFL learners in terms of their academic achievement?
7. What is the relationship between monolingual EFL learners’ additional language proficiency and their academic achievement as compared to that of their bilingual peers?

The study seeks to examine carefully the following hypotheses formulated below:

1. There is a significant difference in favour of bilingual EFL learners, as judged against their monolingual peers, in terms of their general language proficiency.
2. There is a significant difference between monolingual and bilingual EFL learners in terms of their listening comprehension proficiency.

3. There is a significant difference between monolingual and bilingual EFL learners in terms of their reading comprehension proficiency.

4. There is a significant difference between monolingual and bilingual EFL learners in terms of their writing proficiency.

5. There is a significant difference between monolingual and bilingual EFL learners in terms of their speaking proficiency.

6. There is a significant difference between monolingual and bilingual EFL learners in terms of their academic achievement. Bilinguals will get better results.

7. There is a positive relationship between additional language proficiency and the academic achievement of bilingual EFL learners as compared to that of monolinguals.

A detailed explanation of the methods undertaken to examine the researcher's assumptions are presented in the following section.

3.3 Methods

3.3.1 Subjects

The sample consists of 98 Iranian EFL undergraduate students who entered the English Language Department (ELD) of Urmia University in the 2002-2003 academic year. It included 56 bilingual Azeri Turkish-Persian speakers (male: 24 and female: 32) and 42 monolingual Persian speakers (male: 17 and female: 25). All the subjects fell within an age range of 18-24 years. Among the bilinguals, 36 participants reported that they acquired their two languages from an early age and the remaining 20 learned their second language, Persian, after the age of 5 when they started school. The original number
(N=123) of the subjects was reduced to 98. This was due to a number of demographic (e.g. age), psychological (motivational orientations), linguistic (being bilingual or monolingual), and educational (previous exposure to English) characteristics of the subjects that were to be held similar during the study. This number included 25 students who were eliminated from the sample for the following reasons:

- Those students who were not within the acceptable age range proposed in the research design, i.e. 18-24. (N=2)
- Students who reported speaking a language other than Azeri Turkish and Persian or had acquired/learned a language different from these languages. Also, there were some students who could not be identified as bilingual or monolingual speakers. (N=6)
- Those who reported a stay in foreign countries (e.g. English speaking countries) or had had any other than school contact with English or any other language. (N=8)
- Those who were recognised as neither instrumentally nor integratively motivated to learn English. (N=2)
- The tests were administered on a voluntary basis. Prior to data collection, all students were informed about the nature of the investigation, the phases and the length of the study. Therefore, all the subjects did the tests voluntarily, except for 7 students, who did not take the test. This is perhaps because they did not feel prepared to take a language proficiency test. There may be some other reasons, however, it was not reasonable to ask them about their personal reasons for not taking the test.

The subjects' distribution in terms of their age, gender, and language background is shown in Table 3.1.
Table 3.1: Description of the Subjects in the Main study

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>percent</td>
<td>N</td>
</tr>
<tr>
<td><strong>Monolingual</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>17</td>
<td>17.35</td>
<td>25</td>
</tr>
<tr>
<td>Female</td>
<td>24</td>
<td>24.49</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>41</td>
<td>41.84</td>
<td>57</td>
</tr>
</tbody>
</table>

3.3.2 Data Collection Instruments

Many important variables may be involved in additional language acquisition/learning, particularly, in learning a foreign language. These individual and societal factors may have potentially beneficial or detrimental effects on the acquisition/learning of the language in question. As a consequence, it is not possible to provide a reasonable explanation to account for the results of studies unless most of these variables are taken into consideration. As far as research on bilingualism is concerned, the most important factors to consider include motivation, attitudes, age, social-economic status of the learners, language history, linguistic contexts, function of languages, and educational factors (Baker, 1993, Segalowitz, 1997, Cenoz, 2000, and Grosjean, 2000). It is believed that a rigorous control of these variables in the language acquisition contexts should be attempted to obtain more generalizable findings as much as possible. To this end, the subjects were asked to complete a background information questionnaire (BIQ, presented in its full version in Appendix B) developed by the investigator. It was translated into Persian, the common language among the subjects. It included several sets of items that elicited information about the learners as far as the independent variables were concerned.
Independent Variables

3.3.2.1 Demographic information

A part of the BIQ included items on the subjects’ ages, genders, and socio-economic statuses (SES). In order to find out the real effects of the linguistic backgrounds of the subjects (being bilingual or monolingual), the researcher attempted to find the relationship between the learners’ social identity and their learning outcomes. The criterion applied to determine the social class ratings of the subjects was their parents’ educational attainment. In the Iranian context parental education was chosen as the indicator of social class membership for a number of reasons. In the first place, information about the learners’ parents’ educational attainment is considered to be one of the best obtainable indirect measures of SES (Wagner, et al., 1981). Secondly, it is relatively easy to obtain and is not as potentially embarrassing a topic for information as questions about family income (Freeman, 1996). In the third place, Iran’s policy of social classification is basically according to the levels of education people obtain. On this basis, three main social groups are identified within the social structure of Iran:

1. Lower / working class: including those graduated from high schools (called Diplom) or lower levels;
2. Middle class: including graduates with bachelor degree from universities (called Karshenas formerly known as Licence) and the lower levels that contain those with associate degrees (Foghediplom), and finally;
3. Upper class: including postgraduates with higher education.

The two indices of social class, namely, students’ mothers’ educational attainment and their fathers’ educational attainment, thus, gave us the following social groups:
Table 3.2 Socio-economic Classification of the Subjects According to Parental Education

<table>
<thead>
<tr>
<th>Groups</th>
<th>Working class</th>
<th>Middle Class</th>
<th>Upper Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES (Father)</td>
<td>M</td>
<td>4.8</td>
<td>47.6</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>10.7</td>
<td>62.5</td>
</tr>
<tr>
<td>SES (Mother)</td>
<td>M</td>
<td>2.4</td>
<td>73.8</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>8.9</td>
<td>80.4</td>
</tr>
</tbody>
</table>

The percentages presented in Table 3.2 suggest that the majority of the subjects in both groups came from the middle class. Among the monolinguals, the two indices of SES reveal the same percent (47%) of the subjects from the upper and middle classes. A very low percentage of the subjects came from the lower social class.

3.3.2.2 Bilinguality

An adequate interpretation of the findings in this study required adequate description of the bilingual group. The questionnaire consisted of three sets of questions that were used as the linguistic background scales (LBS). The first set of questions elicited information about subjects’ first language, second language, the age, the context and the way in which the second language was learned. Moreover, the author intended to comment on the bilingual subjects’ language use patterns through reflecting on their relative use of languages in various contexts. The subjects’ language use patterns could also indicate their language competence, because it is thought that active use of the target language is essential for students to attain a high level of competence in that language (Hoffmann,
A second series of questions were, thus, developed to explore the subjects' contact with language in the family, with peer groups, and community (e.g. parents language/s, the languages spoken to the parents, the languages spoken in various sections of society, etc.). Finally, the third set of LBS questions aimed at estimating the overall language proficiency of the subjects in some relevant languages. It included some self-rating items in which subjects were asked to rate the languages they knew (e.g. Azeri Turkish, Persian, English, and Arabic), in terms of their understanding, speaking, reading, and writing skills. Besides, the bilingual subjects were asked about their education in their first language, if there was any.

The validity and reliability of self-rating measures of learners' profiles have been viewed as defective because of lack of objectivity, possible social desirability response bias, (Ehrman & Oxford, 1995), and possible dependence on age, cultural and personality factors (Blanche & Merino, 1990). However, despite the disadvantages, in accordance with Harris and Nelson (1992) and Francis (1999), self-ratings have sometimes proven to be adequate measures of fluency when a homogeneous group of bilinguals is desired. They are also considered techniques in providing data more rapidly and easily. Hoffmann (2001) considers self-rating techniques as the only satisfactory means of eliciting information on the ability in different skills, and the order of learning in assessing the bilingual's language background.

Based on the information obtained from the LBS items of the questionnaire, students were assigned to one of two groups of 'Persian Monolinguals' and 'Azeri Turkish-Persian bilinguals'.
The first group comprised those with no knowledge of another language except for their first language, Persian. They reported no prior exposure to any other language, and any use of other language/s in formal or informal situations nor had the need to communicate in any other language. They all had monolingual Persian speaking parents.

The second group comprised those from a bilingual home with informal knowledge of their first language, Azeri Turkish, and formal knowledge of their second language, Persian. They had general competence, specifically good oral and aural skills, in their first language and made regular use of it in their everyday lives, but they had no opportunities to develop register aspects of their L1 literacy through schooling. Although, the Persian language is typically learned in an educational setting, the bilingual subjects reported use of both languages whenever they needed to. This implies that bilinguals are more fluent in their first language, but they move in and out of the monolingual and bilingual language modes depending on various situations. Both of their parents were native speakers of Azeri Turkish and like their children had been trained in Persian at school. The two groups shared the same skills of listening, reading, speaking, and writing in their similar language, Persian.

Therefore, the subjects consisted of two groups of EFL students who were learning English in the foreign context of Iran. The Azeri Turkish/Persian speaking group acquired their first language in the family and the social environment. In addition, along with their first language, they learned and acquired their second language through schooling and in the community. The Persian-speaking group acquired their language in their family and in the community. They were also instructed in their native language, Persian, at school.
3.3.2.3 English Language experience

To make the participants as similar as possible in terms of their previous exposure to the English language, the researcher developed some items on the students' English language history. These items asked about the subjects' own assessment of their English as well as their exposure to it, and the length of exposure, if there was any, before they entered university. Except for a few subjects who were excluded from the sample, all the test takers were false beginners of English language who had received a limited amount of instruction in English before entering university.

3.3.2.4 Social-Psychological Factors

The subjects' orientations towards learning English were assessed via a series of five-point scale Likert-format items. It included 11 selected items on integrative and instrumental motivation to which the subjects replied by choosing: strongly agree, agree, no opinion, disagree, and strongly disagree. Each group was divided into two categories, the first category included those whose motivation was instrumental and the second category who were motivated integratively. In this investigation the main reasons for using a series of selected items on motivation indices were, (a) to place the subject at the same levels of motivation and (b) to eliminate the mediating role of this important factor as much as possible. Evaluating motivation in its real meaning required a series of comprehensive questions on the elements of motivation that was beyond the scope of this study.

The mean scores of the subjects in terms of their motivation indices in each group are presented in Table 3.3.
### Table 3.3 The Mean Scores of Motivational Indices in Each Group

<table>
<thead>
<tr>
<th></th>
<th>M (int)</th>
<th>M (ins)</th>
<th>M (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monolingual</td>
<td>25.52</td>
<td>16.11</td>
<td>41.63</td>
</tr>
<tr>
<td>Bilingual</td>
<td>25.23</td>
<td>16.53</td>
<td>41.76</td>
</tr>
</tbody>
</table>

M (int): integrative motivation  
M (ins): instrumental motivation  
M (total): total motivation

What is implied by the mean scores is that both groups can be placed almost at similar levels, in terms of their motivation to learn English. In other words, it can be claimed that the subjects were not much different in terms of their motivational levels, including its two indices, i.e. integrative motivation and instrumental motivation from the beginning of the investigation.

### Dependent Variables

Additional language proficiency attained through learning English as a third language (L3) among bilinguals and as a second language (L2) for monolinguals, as well as their academic achievement, were categorized as the two dependent variables in this study. Measurement tools and procedures for these dependent variables are illustrated below:

#### 3.3.2.5 Language Proficiency

The research instrument that provided performance information on general language proficiency and its four component skills was the Cambridge First Certificate in English (FCE). It recognises the ability to deal confidently with a range of written and spoken communications. The FCE test covers all the four language skills and includes a range of tasks that assess individuals' ability to use English.
One should admit that there is no best format for testing language proficiency and each format has its own strengths and weaknesses; nevertheless, the FCE test met some characteristics that justify the researcher's choice for comparison purposes.

First of all, different methodologies may prove useful in investigating language proficiency. Harley (1997) believes that the choice of testing method may be decided based on the groups' learning experience, since different groups of learners have different arrays of language learning experiences. In Iranian universities, instruction of English as a foreign language is basically focused on the four language traits i.e. aural and oral skills, reading and writing skills, separately. Therefore, the four papers of the FCE test could easily measure the EFL learners' proficiency in each language skill. Besides, the performance of the subjects in the four papers could supply a global finding for their language proficiency, in general.

Secondly, the structure of the FCE tests i.e. four separate papers for each language skill is consistent with the researchers' approach towards defining the main dependent variable, i.e. language proficiency. It was also thought that the FCE test would help the investigator easily examine the four hypotheses which were formulated with regard to the components of language proficiency.

Finally, in selecting a standard and international test, the researcher had to take into account some cultural constraints in the particular context of the Islamic Republic of Iran. The FCE test seemed to be an appropriate instrument, in terms of content and structure, as far as the cultural context of the study was concerned. The University of Cambridge Local Examination Syndicate (UCLES) has notified that this test is suitable for learners of all nationalities, whatever their first language or cultural background is.
The FCE test consists of five papers: Reading comprehension, Writing, Language Use, Listening comprehension, and Speaking. As far as the research questions and the hypotheses were concerned and due to some constraints in terms of administration, the third paper of the test, Use of English, was excluded from this study. The main focus in this investigation was to assess the four language traits measured typically through the four papers briefly explained below.

Paper 1: Reading Comprehension

The Reading paper assessed the learners' ability to read and understand texts taken from fiction and non-fiction books, journals, newspapers and magazines. The learners were expected to be able to show understanding of gist, detail and text structure, and deduce meaning.

Paper 2: Writing

The Writing paper assessed the subjects' ability to write non-specialised text types such as letters, articles, reports, compositions and reviews of 120-180 words covering a range of topics.

Paper 4: Listening Comprehension

The Listening paper assessed the subjects' ability to understand the meaning of spoken English, and to extract gist and meaning from spoken text. The texts are taken from a variety of text types including interviews, discussions, lectures and conversations.
Paper 5: Speaking

The Speaking test assessed the subjects' ability to interact in conversational English in a range of contexts. It contained four parts, including an interview section, individual long turns of about one minute, a collaborative task and a discussion. Subjects were provided with stimulus material such as photographs and drawings. They took the Speaking Test in pairs.

The four papers mentioned above were piloted on a group of 36 EFL students. The results of the pilot test indicated that the FCE papers were highly reliable. (A summary of the pilot study is presented in section 3.3.3.1.)

3.3.2.6 Academic Achievement

As explained earlier, one of the objectives in this research was finding the possible differences between bilinguals and monolinguals in terms of their academic achievement in two years. Academic achievement of the EFL students in this context means their educational success assessed through their portfolio, which contains all their scores in the content courses, as well as the English language-related courses. Before moving to the procedures taken in every phase of the study, the researcher feels it necessary to provide further explanation about how the EFL learners qualify academically to obtain their degrees at the end of their education at Urmia University, where the research was carried out.

The ELD aims to train undergraduate EFL learners who are admitted to the ELD based on a nationwide University Entrance Examination called ‘Knokor’. The EFL students usually come from various backgrounds. Some EFL learners may be well developed in
terms of their English language background\textsuperscript{12}, however, based on the researcher’s own experience most EFL learners initiate their academic contact with English language at the university. It usually takes 7 to 8 semesters (about 4 years) for the students to graduate. They have to pass certain modules recommended by the Department. In addition to English language-related subjects (e.g. aural-oral skills, English language grammar, reading comprehension, writing, phonology, Linguistics, English literature, etc.), the students have to take some core-courses (e.g. Iranian studies like theology, reading Persian literary texts, History, etc). At the end of each semester, the students’ grade point average (GPA) acts as an indicator of the level of their academic achievement. GPA ranging from 0-20 is figured out based on the students’ performances in all the courses including the general and English language-related courses. They are placed in five levels of academic success as follows:

\[
\begin{align*}
A &= 17 - 20 \\
B &= 14 - 16.9 \\
C &= 12 - 13.9 \\
D &= 10 - 11.9 \\
E &= 0 - 9.9 
\end{align*}
\]

When a student passes 135 credits successfully, they qualify for a Bachelor’s degree, BA, in EFL.

3.3.3 Design and Procedures

In this research, the hypotheses concerned with such variables as the ultimate additional language proficiency including each language skill and the academic achievement of bilinguals as compared to monolingual EFL learners. Considering the nature of these variables, the most appropriate research design seemed to be one of a ‘longitudinal

\textsuperscript{12} This aspect of the learners was taken into account as a controlled factor in this study.
survey' nature. Through such a study, one can describe, explore and explain the relationship between the variables. In other words, through this approach the investigator can describe the variables as they exist, and find a logical relationship among them through testing the hypotheses that will eventually end with some insights into the subject matter.

The first step to proceed the investigation was to test whether the articulation of data collection instruments i.e. the FCE papers and the BIQ were appropriate to meet the main objectives. It was necessary to find out if there were any problems with these instruments at an early stage of the investigation. In order to clarify the effectiveness and relevance of the instruments, prior to the main investigation the researcher carried out a pilot study, briefly summarised below.

3.3.3.1 Pilot study
Objectives

UCLES asserts that all the papers of the FCE test are reliable and the questions in all papers provide a very reliable assessment of EFL learners' ability levels (http://www.echolanguageschool.com/exams.html). However, to contribute to standard characteristics of the test as a research tool, the investigator piloted it before using it in the main study. The main objectives were:

1. The operation of the pilot study mainly aimed at informing the researcher on the reliability of the criterion tests with reference to the Iranian context. In spite of the fact that UCLES convinces the test users that it is suitable for learners of all nationalities, whatever their first language or cultural background is, the researcher had to conduct the pilot study because of the special cultural differences in the Iranian context.
2. A pilot test would prove helpful to obtain some insights about the BIQ questionnaire. It was thought that the subjects' responses might bring some modifications in the questionnaire.

3. The pilot study was necessary to explore the feasibility of data collection processes for future considerations and to gain general awareness of the issues to be addressed in the main study.

4. It could help to get an idea about a criterion level to be decided upon in order to place the subjects in almost the same level of proficiency in the first phase of the main study.

Subjects

The research instruments were tested on 36 EFL students in the ELD, University of Urmia. The subjects were randomly selected based on their responses to the BIQ, which was administered first. The sample included 21 learners who were identified as bilingual Azeri Turkish-Persian speakers and 15 monolingual Persian speakers. Among the subjects there were 13 male (8 bilingual and 5 monolingual) and 23 female (13 bilingual and 10 monolingual) students within an average age of (21.21 bilinguals and 21.28 monolinguals). Table 3.4 describes the subjects' profiles in the pilot study.

<table>
<thead>
<tr>
<th>Table 3.4: Description of the Sample in the Pilot Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male</strong></td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Monolingual</td>
</tr>
<tr>
<td>Bilingual</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Procedures and Data Analysis

The Pilot Test administration took place in a period of 2 weeks during Spring 2003. The researcher’s colleagues, well aware of research procedures, had formally accepted to collect data through a defined protocol. Following the time schedule of the UCLES, the investigator encouraged the examiners to administer the test in three separate but subsequent sessions. The Reading comprehension paper, the largest one, was administered first, then the other two papers, listening comprehension and writing, were conducted a day later. This reportedly eliminated some factors affecting subjects’ performances (e.g. fatigue). Oral proficiency was assessed through interviews that lasted between 15 and 20 minutes for every two students.

To estimate the reliability scores of the four papers the researcher had to monitor two distinct methods due to the different forms of the FCE test papers. Classical internal consistency estimates i.e. KR-21 and Cronbach’s Alpha were calculated for the discrete item tests: paper 1, reading comprehension, and paper 4, listening comprehension. For the other two subjective tests of writing and speaking, the researcher analysed Intra and Inter Rater Reliability scores in the following way.

Three well-educated and qualified raters with Ph D degrees in Applied Linguistics, who had deep insight into the research methods, were asked to rate the written production and oral interviews of the subjects. In order to limit the measurement error due to rater subjectivity the researcher took some precautions. First, for the independent use of the judges thorough information and the detailed rating schedule determined by the UCLES, i.e. the general mark schemes and task-specific mark schemes were introduced to the scorers. This particular rating schedule calls for equal weighting of mechanisms and content with equal points awarded for satisfactory performance in each component area.
Second, the raters were asked to employ anonymous or blind marking procedures. And finally, the raters were encouraged to score every sample on the composition and oral interview a second time, in a time interval of three weeks. Therefore, the researcher was confident that rating was attempted to be as objective as possible, because “using such a rating schedule tends to objectify the raters tasks in the sense that ratings by persons at various times will reflect the same underlying criteria and, thus, become more consistent” (Henning, 1987: 34).

Summary descriptive statistics including the performance mean scores of the subjects in the pilot study are presented for all test papers in Table 19, (Appendix F). It turned out from the analysis of the results that the reliability coefficients for the reading comprehension and listening comprehension papers were statistically within the acceptable limits (Table 3.5).

**Table 3.5: Reliability Estimates of Paper 1 (Reading Comprehension) and Paper 4 (Listening Comprehension)**

<table>
<thead>
<tr>
<th></th>
<th>Paper 1</th>
<th>Paper 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>KR-21</td>
<td>.885</td>
<td>.736</td>
</tr>
<tr>
<td>Cronbach's $a$</td>
<td>.905</td>
<td>.757</td>
</tr>
</tbody>
</table>

Similarly, the intra-rater and inter-rater reliability scores computed for the speaking and writing papers (Table 3.6) were at a highly significant level. These estimates indicated very close agreement among the raters and stability within each rater.
Table 3.6 Summary Table for Intra/inter-rater Coefficients for the Oral Interview and Compositions

<table>
<thead>
<tr>
<th></th>
<th>Intra-rater Reliability**</th>
<th>Inter-rater Reliability***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Rater 1</td>
</tr>
<tr>
<td>Writing</td>
<td>36</td>
<td>.947*</td>
</tr>
<tr>
<td>Speaking</td>
<td>20</td>
<td>.743*</td>
</tr>
</tbody>
</table>

* Correlation is Significant at the 0.01 Level (2-tailed)
** Based on two occasions (in three weeks interval)
*** The inter-correlations of three raters through the Spearman-Brown Prophecy

General outcomes of the Pilot Study

The correlation coefficient estimates, based on the analysis of the subjects' performances on each paper of the FCE test, were highly significant (See Tables 3.5 & 3.6). This implied that the measurement tools were internally reliable in the Iranian context. In addition, the intra-rater and inter-rater reliability coefficients were evidence of a tendency towards standardization in rating procedures for the two papers of writing and speaking. One can, therefore, infer that selecting the raters reasonably, informing them well about the scoring principles, and finally following appropriate administration procedures were successfully practised in the pilot study, and these procedures could be confidently implemented in the main investigation.

Analysis of the responses to the BIQ, also, suggested some slight modifications in the questionnaire. For example:

• Instead of asking the respondents their exact ages, it was reasonable to put them within age ranges (e.g. 18-22). Asking direct questions about the age of the
respondents might have some psychological effects, even though the responses were treated anonymously.

- Some items needed more explanation. Using expressions like, you mentioned in item N, seemed necessary to make the connections between some items clearer.
- Some questions did not necessarily elicit the information expected. They were, therefore, deleted in the revised questionnaire.

### 3.3.3.2 Main Study

This study was designed in three phases in a period of two years. In every phase (Summer 2003, Winter 2004, and Summer 2004) the subjects were measured in terms of their additional language proficiency through the FCE test. At the same time, their academic achievement records were obtained from the School of Arts, University of Urmia. Some academic members of ELD in Urmia University, who formally accepted to cooperate with the researcher in the administration processes, conducted the measurements. They were all informed about test administration procedures through some training sessions and written guidelines (Appendix C).

The first phase of data collection was at the end of the students first academic year (June 2003) at the university. The second series of data collection, phase two, according to the proposed schedule took place in the middle of the students second academic year (January 2004) and the last stage, phase 3, was conducted at the end of the second academic year (June 2004).

All the tests, apart from the oral interviews, were written tests carried out in groups. The subjects completed the language proficiency tests within a two-week period. Test administration, like that of the pilot study and based on the schedule proposed by UCLES
took place in three separate but subsequent sessions. In other words, in two days the reading comprehension test was followed by the other two papers i.e. listening comprehension and writing. The interviews were carried out in separate sessions in groups of four (two students and two interviewers: the interlocutor and the assessor). All the interviews that lasted between 15 and 20 minutes for every two students were recorded for future considerations. As far as recording the conversation was concerned, the interviewers were persuaded to eliminate all other external sounds by choosing an appropriate Interview Room in the School of Arts.

Based on the scoring procedures outlined by UCLES, the computer scans the recorded answers of every individual and adjusts the total score on each paper to give a mark out of 40. This type of adjustment was not done in this study (neither in the pilot study nor in the main investigation). The reason was that the FCE test was not used for granting ranks to the subjects, rather it was chosen for research purposes. Besides, the scoring scales were the same among all subjects, so there was no need for adjustment as far as comparison was the main focus. Every student was marked based on the scoring procedures outlined below.

The first paper, Reading Comprehension, included 35 questions in two sections of multiple-choice items. 25 items tested use or usage and 10 items were based on reading passages. Questions 1 to 21 carried two marks each and the remaining carried one mark each. Therefore, the score for reading paper ranged from (0-56).

The second paper, Writing, consisted of 5 prompts from which the subjects had to choose two topics to produce an acceptable piece of writing of 120-180 words in response to each. For the assessment of every piece of writing, the general mark scheme and task-
specific mark scheme were applied to award a final mark ranging from (0-20) for every piece of writing. The two marks, then, were added to make the final mark in writing ranging from 0-40.

The third paper, Listening Comprehension, comprised 30 questions. Each question in this paper carried 1 mark. The total score for this paper ranged from 0-30.

Finally, the fourth paper, Speaking, was a face-to-face oral interview. Due to some practical limitations, only 20 EFL learners were selected for interviews. Five assessment criteria, four analytical and one global, were applied in relation to the level of the examination and to the prescribed tasks: Grammar and Vocabulary, Discourse Management, Pronunciation and Interactive Communication on a scale ranging from 0 to 5 and Global Achievement ranging from 0-20. Each of the two interviewers administering oral interviews assigned independent rating to each subject immediately upon the completion of the interviews. The Assessor awarded marks for each of the analytical criteria coming to 20 as the total score. The Interlocutor gave one global mark (20) for the students' performance across all parts of the test. The final score 0-40 for each individual as regards oral production was the average of the totals of the two markers.

Finally, the subjects’ performance scores in all the test papers, except for those of speaking, were added to construct their total Language Proficiency ranging from 0-126. As already mentioned, the rationale for excluding the speaking scores was that only 20 subjects were interviewed, while, the remaining 78 lacked scores on oral production tests. Statistically speaking, this would affect the measures of central tendency and variability.
Therefore, it seemed sensible to exclude the speaking scores from the analysis as far as obtaining significant results was concerned.

At the same time as the additional language proficiency of the subjects was assessed in every phase of the study, their academic records were consulted at the end of each academic year, i.e. the 2002-2003, 2003-2004 academic years and once in the middle of the second academic year 2003-2004.

3.3.4 Data Analysis

The statistical analyses were carried out by means of the SPSS (Statistical Package for Social Sciences). It included:

Descriptive statistics

These sets of analyses involved summarizing data, calculating measures of central tendency (mean, mode, median), measures of variability (standard deviation and variance) for the dependent and background variables for each of the groups used in the analyses. Graphs and tables were, then, used for a visual representation of the results so that comparing of the behaviour of each group was made easier.

T-tests for Dependent Samples

A series of t-tests were used to make sure whether the mean scores of the subjects within each group, in terms of the dependent variables, varied significantly in the course of the three phases of investigation over two years.
T-tests for Independent Samples

Multiple t-tests were applied to make sure that the possible differences between the mean scores of the two groups were significant at 5% level. A majority of the t-test significance results, however, were at the 0.01 levels or lower. The rationale for selecting the t-test for some selected comparisons was that the main assumptions regarding normal distribution and homogeneity of variances were clearly met.

Correlational Analyses

Depending on the nature of the variables separate correlation coefficients, i.e. Pearson's Product-Moment Correlation and Spearman Rank Correlation were computed requiring a minimum significance level of \( p < 0.05 \).

Two sets of correlations were calculated.

- Degree of associations between measures of TLP and TAACH, and

- Degree of association between background variables and the dependent measures.

These sets of analyses, although not the main focus of investigation, were used to identify the possible effects of the main variables.

As correlations between some variables were key correlations, they were further checked for linearity (e.g. motivation orientations and TLP) and absolute values in terms of confidence intervals (e.g. TLP and TAACH). (These statistical steps are explained in detail in Chapter four).
CHAPTER FOUR

FINDINGS: PRESENTATION, ANALYSES & DISCUSSION

4.1 Introduction

As has been previously mentioned, the main objective in this study was to evaluate the possible influences of bilingualism on learning a third language, English as a foreign language in this study. The main assumption was that bilingualism might have some positive effects on the English language proficiency achievement of the Iranian EFL learners. In other words, it was speculated that those who have already experienced learning two languages (Azeri Turkish-Persian bilinguals) might be better English language learners than those with only one language (Persian monolinguals) in their repertoire. In addition to the general language proficiency, the four main language domains including listening, reading, speaking and writing were also separately evaluated. This would help us to see which language skills bilingualism affects more. In formulating the main research hypotheses, certain research questions were identified that awaited answers. An attempt has been made to provide responses to all of these questions through exploring differences that may exist between monolingual EFL learners and their bilingual peers in terms of their additional language proficiency and academic achievement.

The previous chapter encompassed a detailed description of the methodological approach undertaken in this investigation including the subjects' profiles, measurement tools, and the procedures pursued for data collection. The present chapter, which is organised in two main sections, presents the findings as follows:
The first section demonstrates data related to the seven main hypotheses and other relevant findings summarized and displayed through tables and graphs. These data are, then, systematically analysed by means of appropriate tests to make statements about the statistical significance of the findings. The findings are all described according to the research questions and the proposed hypotheses outlined in Chapter 3. In the second section, the findings are discussed and interpreted based on the relevant theoretical views developed in the existing literature and reference is made to the previous research findings whenever possible. It is also argued that a considerable proportion of the results, which confirm the results of the previous research studies, gives greater reliability to the findings. In what follows, findings related to each variable under investigation will appear first and a general discussion of the findings will be presented later.

4.2 Principal Findings

In this longitudinal survey, data on the additional language proficiency and academic achievement as dependent variables were obtained from the subjects’ performances on the FCE tests and their academic records in the three main phases of the study. Descriptives including means, standard deviations, and variances obtained for each variable that provide the main database for all computations and comparisons between monolingual and bilingual subjects all appear in Tables 1-6 (Appendix D). During all the analyses and the interpretations it has to be borne in mind that the statistical significance of the results (p < 0.05) are indicated by the “p” levels. Therefore, the chance occurrence will be 5% where a t-test or a correlation result is p<0.05.
A first step of data analysis was to examine the research hypotheses according to the order in which they were proposed. In other words, due to the fact that, in addition to total language proficiency, it was important to find out which language skills bilinguality affects more, from the beginning, a distinction has been made between total language proficiency performance scores and the other four main component skills. The general trend of the findings is presented in the following 7 parts that cover the results for each hypothesis.

4.2.1 Hypothesis 1

The first hypothesis proposed a significant difference between monolingual and bilingual EFL learners in terms of their total language proficiency. It was expected that bilinguals would outperform monolinguals in tests of language proficiency.

To investigate this assumption, a series of multiple t-tests for independent samples were performed on the total language proficiency (TLP) scores the subjects obtained in every distinct phase. The rationale for selecting the t-test for independent samples for all comparisons between the two groups was that the main assumptions regarding normal distribution and homogeneity of variances were clearly met. The results from these sets of independent t-test analyses showed that bilinguals obtained better results in language proficiency tests as compared to their monolingual peers. In all phases, there was a significant difference between the two groups as far as their total language proficiency was involved. In other words, as illustrated in Table 4.1, bilinguals scored significantly higher than monolinguals in phase one (t (96) = 2.18, P = 0.03); the same pattern is evident from the results in the second, and even stronger in the third phase, when again

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13 In order to find out whether the underlying distributions were normal and that the variances of the distributions being compared were homogenous, the Komogorov-Smirnov test (K-test) and Levene’s test (F-test) for independent and dependent samples were applied.
the higher means belonged to the bilingual group (phase 2: \( t(96)=2.44, P = 0.01 \); phase 3: \( t(96)=3.01, P=0.01 \)).

**Table 4.1. Total Language Proficiency: Independent t-test Results (both groups)**

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Groups</th>
<th>N</th>
<th>( \bar{X} )</th>
<th>SD</th>
<th>df</th>
<th>( T_{obs} )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(TLP 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>42</td>
<td>46.02</td>
<td>11.26</td>
<td>96</td>
<td>2.18</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>56</td>
<td>51.41</td>
<td>12.62</td>
<td>96</td>
<td>2.44</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>(TLP 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>42</td>
<td>49.71</td>
<td>11.14</td>
<td>96</td>
<td>2.44</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>56</td>
<td>55.67</td>
<td>12.55</td>
<td>96</td>
<td>3.01</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>(TLP 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>42</td>
<td>59.11</td>
<td>10.88</td>
<td>96</td>
<td>2.44</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>56</td>
<td>66.05</td>
<td>11.53</td>
<td>96</td>
<td>3.01</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

Key: M: Monolinguals  B: Bilinguals  TLP: Total Language Proficiency Phase (1-3)

Figure 4.1 that shows the total scores of the subjects in language proficiency allows a more meaningful comparison of the groups involved.

In this sense, the significant differences observed between the two groups provided strong support to what the first hypothesis predicted: that bilinguals would outperform monolinguals in terms of total language proficiency.
4.2.2 Hypothesis 2

The second hypothesis proposed a significant difference between monolingual and bilingual EFL learners in terms of their listening comprehension proficiency (LCP).

Analysis of the data related to listening comprehension performance of the two groups in all phases, once again, confirmed that bilinguals achieved the highest scores in tests of listening comprehension. T-test analysis revealed that the difference between the two groups in all phases stood at a highly significant level \( t(96) = 3.02, 3.34, 3.43; P = 0.01 \) as far as listening comprehension proficiency was concerned. Therefore, according to the findings (Table 4.2), it can be stated that the second hypothesis is also strongly supported in favour of bilinguals. Figure 4.2 displays the overall mean scores.
Table 4.2. Listening Comprehension Proficiency: Independent t-test Results (both groups)

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Groups</th>
<th>N</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>df</th>
<th>( T_{obs} )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(LCP1) Phase 1</td>
<td>M</td>
<td>42</td>
<td>10.78</td>
<td>3.07</td>
<td>96</td>
<td>3.02</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>56</td>
<td>13.05</td>
<td>4.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(LCP2) Phase 2</td>
<td>M</td>
<td>42</td>
<td>11.38</td>
<td>3.04</td>
<td>96</td>
<td>3.34</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>56</td>
<td>13.92</td>
<td>4.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(LCP3) Phase 3</td>
<td>M</td>
<td>42</td>
<td>13.30</td>
<td>3.05</td>
<td>96</td>
<td>3.43</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>56</td>
<td>15.80</td>
<td>3.88</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key  
M: Monolinguals  
B: Bilinguals  
LCP: Listening Comprehension Proficiency Phase (1-3)

Figure 4.2. Listening Comprehension Proficiency: Comparison of the Mean Scores (both groups)

Key  
M: Monolinguals  
B: Bilinguals  
LCP (1,2,3): Listening Comprehension Proficiency phases 1-3
4.2.3 Hypothesis 3

The third hypothesis proposed a significant difference between monolingual and bilingual EFL learners in terms of their reading comprehension proficiency (RCP).

The results included in Table 4.3 and Figure 4.3 correspond to the analysis of differences between the mean scores to compare reading comprehension proficiency of the two groups. A similar pattern to the preceding tables is reflected by the figures in Table 4.3, i.e. the lower scores corresponded to the monolinguals as compared with bilinguals. This difference was more discernable in the third phase of the study when the mean score of bilinguals (28.64) was remarkably higher than that of monolinguals (24.69). T-test analysis revealed that the differences between the two groups were at a significant level in phase 1 \( t(96) = 2.04, P = 0.04 \), phase 2 \( t(96) = 2.48, P = 0.01 \) and finally even more accentuated in phase 3 \( t(96) = 2.91 \), with the highest level of significance, i.e. \( P = 0.011 \). Therefore, the results lent considerable support to the third assumption that predicted a significant difference between bilinguals and monolinguals in terms of their reading comprehension proficiency.
Table 4.3. Reading Comprehension Proficiency: Independent t-test Results (both groups)

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Groups</th>
<th>N</th>
<th>( \bar{X} )</th>
<th>SD</th>
<th>Df</th>
<th>T_{obs}</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(RCP1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td></td>
<td>56</td>
<td>17.71</td>
<td>7.33</td>
<td>96</td>
<td>2.04</td>
<td>0.04</td>
</tr>
<tr>
<td>M</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20.78</td>
<td>7.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td>56</td>
<td>20.19</td>
<td>6.88</td>
<td>96</td>
<td>2.48</td>
<td>0.01</td>
</tr>
<tr>
<td>M</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23.69</td>
<td>6.94</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 3</td>
<td></td>
<td>56</td>
<td>24.69</td>
<td>6.68</td>
<td>96</td>
<td>2.91</td>
<td>0.01</td>
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<tr>
<td>M</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28.64</td>
<td>6.61</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>B</td>
<td>56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: M: Monolinguals  
B: Bilinguals  
RCP: Reading Comprehension Proficiency Phase (1-3)

Figure 4.3. Reading Comprehension Proficiency: Comparison of the Mean Scores (both groups)

Key: M: Monolinguals  
B: Bilinguals  
RCP (1,2,3): Reading Comprehension Proficiency phases 1-3
4.2.4 Hypothesis 4

The fourth hypothesis proposed a significant difference between monolingual and bilingual EFL learners in terms of their writing proficiency (WP).

The measures shown on Table 4.4 represent data on the performances of the subjects on tests of written production. When the mean scores were observed, it was revealed that, except for the second phase of the study when monolinguals obtained a higher mean score (18.14) than bilinguals (18.05), in the first and second phases of the study bilinguals achieved better results (17.57, 21.60) than monolinguals (17.52, 21.11). However, details of the relevant t-test analysis in all the three phases \( t (96) = .05, -.09, .57, P > 0.05 \) turned out to reveal no significant differences between the two groups under investigation. Thus, the results related to the written production did not provide evidence for the proposed hypothesis. Accordingly, the fourth hypothesis was rejected. (The possible reasons for a lack of significant difference between the two groups in terms of writing proficiency are presented in detail in the second section of the present chapter, i.e. Discussion).

Table 4.4. Writing Proficiency: Independent t-test Results (both groups)

<table>
<thead>
<tr>
<th></th>
<th>Total Score</th>
<th>Groups</th>
<th>N</th>
<th>x</th>
<th>SD</th>
<th>df</th>
<th>T_{obs}</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(WP1)</td>
<td>Phase 1</td>
<td>40</td>
<td>M</td>
<td>42</td>
<td>17.52</td>
<td>96</td>
<td>.05</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>56</td>
<td>17.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(WP2)</td>
<td>Phase 2</td>
<td>40</td>
<td>M</td>
<td>42</td>
<td>18.14</td>
<td>96</td>
<td>-.09</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>56</td>
<td>18.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(WP3)</td>
<td>Phase 3</td>
<td>40</td>
<td>M</td>
<td>42</td>
<td>21.11</td>
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<td></td>
<td>B</td>
<td>56</td>
<td>21.60</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key**
- M: Monolinguals
- B: Bilinguals
- WP: Writing Proficiency Phase (1-3)
Figure 4.4 enables us to see how the two groups performed in written production tests.

**Figure 4.4. Writing Proficiency: Comparison of the Mean Scores (both groups)**

<table>
<thead>
<tr>
<th>Mean Scores</th>
<th>WP1</th>
<th>WP2</th>
<th>WP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>17.52</td>
<td>18.16</td>
<td>21.44</td>
</tr>
<tr>
<td>B</td>
<td>17.57</td>
<td>18.05</td>
<td>21.60</td>
</tr>
</tbody>
</table>

**Key**
- M: Monolinguals
- B: Bilinguals
- WP: Writing Proficiency

4.2.5 Hypothesis 5

The fifth hypothesis proposed a significant difference between monolingual and bilingual EFL learners in terms of their speaking proficiency (SP).

The same procedures were followed in analysing the subjects' speaking proficiency scores as for testing hypotheses 1, 2, 3, and 4. In other words, data related to the performance of the groups in terms of speaking in each of the three phases were submitted to Independent samples t-test. Taking into account the results that Table 4.5 demonstrates, it seems that, except for the first phase of the study \( t (18) = 1.96 \),
P=0.06} when the results were marginal, bilingual subjects significantly outperformed their monolingual peers in phase 2 {t (18) = 2.05, P= 0.05} and phase 3 {t (18)= 3.27, P= 0.01}.

Table 4.5. Speaking Proficiency: Independent t-test Results (both groups)

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Groups</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>T_{obs}</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(SP1) Phase 1</td>
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<td>M</td>
<td>10</td>
<td>18</td>
<td>5.28</td>
<td>18</td>
<td>1.96</td>
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<tr>
<td></td>
<td></td>
<td>B</td>
<td>10</td>
<td>22.05</td>
<td>3.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SP2) Phase 2</td>
<td>40</td>
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<td>10</td>
<td>19.50</td>
<td>5.03</td>
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<td>2.05</td>
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<td></td>
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<td>B</td>
<td>10</td>
<td>23.70</td>
<td>4.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SP3) Phase 3</td>
<td>40</td>
<td>M</td>
<td>10</td>
<td>22.30</td>
<td>4.21</td>
<td>18</td>
<td>3.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>10</td>
<td>27.90</td>
<td>3.38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key
M: Monolinguals
B: Bilinguals
SP: Speaking Proficiency Phase (1-3)

This difference was even stronger in the third phase of the study where bilinguals obtained a mean score of 27.90 as compared to monolinguals who scored 22.30. In the first phase of the study, however, the results revealed a marginal significant difference between the groups, though a higher mean score (22.05) belonged to the bilinguals. The overall results, nevertheless, could confirm the fifth hypothesis, which predicted a significant difference between the two groups in favour of bilinguals in terms of their speaking proficiency. (Figure 4.5 illustrates this difference.)
4.2.6 Hypothesis 6

The sixth hypothesis proposed a significant difference between monolingual and bilingual EFL learners in terms of their academic achievement (AACH). It was predicted that bilinguals would obtain better results.

Records obtained for the students’ academic achievements at the end of each main stage of data collection were submitted to three sets of independent t-test analyses. The data summarised in Table 4.6 revealed the same trend of results as in previous findings, i.e. bilinguals outperformed their monolingual peers when their academic achievements were taken into consideration.
Further analysis of the t-test results in phase one \( t (96)=2.40, P=0.01 \); phase 2 \( t (96)=2.09, P=0.03 \), and phase 3 \( t (96)=4.27, P=0.01 \) similar to the other findings revealed a significant difference between the two groups, remarkably in the third phase of the study. The sixth hypothesis being tested, then, appeared to be supported by significant results.

Table 4.6. Academic Achievement: Independent t-test Results (both groups)

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Groups</th>
<th>N</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>df</th>
<th>( T_{obs} )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(AACH1)</td>
<td>Phase 1</td>
<td>20</td>
<td>14.03</td>
<td>1.70</td>
<td>96</td>
<td>2.40</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>42</td>
<td>14.03</td>
<td>1.70</td>
<td>96</td>
<td>2.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>56</td>
<td>14.86</td>
<td>1.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(AACH2)</td>
<td>Phase 2</td>
<td>20</td>
<td>14.43</td>
<td>1.46</td>
<td>96</td>
<td>2.09</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>42</td>
<td>14.43</td>
<td>1.46</td>
<td>96</td>
<td>2.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>56</td>
<td>15.04</td>
<td>1.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(AACH3)</td>
<td>Phase 3</td>
<td>20</td>
<td>14.91</td>
<td>1.39</td>
<td>96</td>
<td>4.27</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>42</td>
<td>14.91</td>
<td>1.39</td>
<td>96</td>
<td>4.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>56</td>
<td>16.10</td>
<td>1.34</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key
M: Monolinguals
B: Bilinguals
AACH: Academic Achievement Phase (1-3)

This difference is more apparent when the mean scores are compared in Figure 4.6
4.2.7 Hypothesis 7

Finally, the last hypothesis proposed a positive relationship between additional language proficiency and the academic achievement of bilingual EFL learners as compared to that of their monolingual counterparts.

To get an insight into the degree of relationship between total language proficiency (TLP) and total academic achievement (TAACH) of the two groups, Pearson’s product-moment correlation coefficients were computed. Interestingly, as the results showed additional language proficiency of bilinguals correlated with their academic

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Footnote: Total academic achievement scores were constructed through adding the scores in the three phases.
achievement more strongly when compared to that of monolinguals. Table 4.7 indicates the degree of connection obtained between the variables.

Table 4.7. Pearson’s Correlation between TAACH and TLP (both groups)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>N</th>
<th>TLP</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAACH</td>
<td>M</td>
<td>42</td>
<td>.20</td>
<td>.18</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>56</td>
<td>.47**</td>
<td>.001</td>
</tr>
</tbody>
</table>

**: Correlation is significant at .001 level

Key

M: Monolinguals
B: Bilinguals
TAACH: Total Academic Achievement
TLP: Total Language Proficiency

As can be seen from the table above, the correlation estimate between TLP and TAACH of bilinguals \(r(56)= 0.47, P= .001\) stands at a significantly stronger level as compared to that of monolinguals \(r(42)= .20, P= .18\), which identified a very weak relationship between their total language proficiency and academic achievement.

In addition, Fisher’s Z transformation was applied to assess the confidence interval for the difference between the correlation coefficients obtained. It turned out that the confidence interval \((r = .47)\) and \((r = .20)\) in a 95% confidence level were \(.10 \leq p_1 - p_2 \leq .62\). Thus, it was concluded that the absolute value obtained for the correlations above (.62) stood at a reliably significant level.
The correlation coefficients obtained and additional Z transformation, would therefore, provide supportive evidence for the last hypothesis.

4.3 Other findings

Further analysis of the subjects' responses to parts 1 and 3 of the questionnaire yielded some results that appear to contribute to the main findings. Although some independent variables like gender, socio-economic status and motivation were not the main focus of this investigation, it was important to be certain that the effects of bilinguality were independent of the effects of these factors. This section deals with the possible effects of these individual, social and psychological variables on additional language proficiency and academic achievement of the subjects. Depending on the nature of the variables separate correlation coefficients, i.e. Pearson's Product-Moment Correlation and Spearman Rank Correlation were computed to find out the degree of association between the variables mentioned above.

4.3.1 Gender

Correlation coefficients computed for the degree of relationship between gender and total language proficiency of the subjects are summarised in Table 4.8 As the results demonstrate, a range of very weak and not significant correlations existed between gender and TLP in both groups, i.e. \( r (42) = .04, P = .78 \) and \( r (56) = -.14, P = .30 \).

The same trend was observed when the degree of association between gender and academic achievement was calculated (Table 4.9). In other words, there was no significant relationship between gender and the academic achievements of the groups \( r (42) = .10, P = .52 \) and \( r (56) = .02, P = .88 \) involved in this study. As a result, the
correlation coefficients produced no conclusive evidence of gender effects on additional language proficiency and academic achievement in the EFL setting in Iran.

Table 4.8. Spearman Rank Correlations between Gender and TLP (both groups)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>TLP (rho)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>Total</td>
</tr>
<tr>
<td>Gender</td>
<td>M</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>32</td>
</tr>
</tbody>
</table>

Table 4.9. Spearman Correlations between Gender and TAACH (both groups)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>TAACH (rho)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>Total</td>
</tr>
<tr>
<td>Gender</td>
<td>M</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>32</td>
</tr>
</tbody>
</table>

Key

M: Monolingual  TLP: Total Language Proficiency
B: Bilingual    TAACH: Total Academic Achievement
M: Male         rho: Correlation coefficient
F: Female
4.3.2 Motivation

At this stage of the research, measures have been undertaken to establish the correlation between the two orientations of motivation (integrative and instrumental) and successful third language learning. Hence, as was explained before, each group was divided into two categories, the first category included those whose motivation was instrumental, and the second category included those who were motivated integratively. Data obtained for both orientations of motivation and total motivation was submitted to Pearson’s Product-Moment correlation analysis in order to determine their relation to the dependent variables. The following results were obtained for both groups.

Table 4.10. Pearson’s Correlations between Motivation and TLP (both groups)

<table>
<thead>
<tr>
<th>Variables</th>
<th>(r) TLP M</th>
<th>p</th>
<th>(r) TLP B</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>M (Int)</td>
<td>.25</td>
<td>.10</td>
<td>.12</td>
<td>.39</td>
</tr>
<tr>
<td>M (Ins)</td>
<td>.06</td>
<td>.68</td>
<td>.03</td>
<td>.80</td>
</tr>
<tr>
<td>M (Total)</td>
<td>.23</td>
<td>.14</td>
<td>.17</td>
<td>.22</td>
</tr>
</tbody>
</table>

Key
M (Int): Integrative Motivation
M (Ins): Instrumental Motivation
M (Total): Total Motivation obtained through adding the scores in M (int) and M (ins)
TLP: Total Language Proficiency
R: Correlation Coefficient

As the results demonstrate (Table 4.10), no remarkable differences were recognized between subjects’ with integrative motivation \( \{r (42)= .25, P=.10\}\); \( \{r (56)= .12, P=.39\}\) and those with instrumental motivation \( \{r (42)= .06, P=.68\}\); \( \{r (56)= .03, P=.80\}\)
when the relationship between motivation indices and total language proficiency was established.

The same trend was identified when the connection between total academic achievement and motivational orientations was established. In other words, once again, a series of weak correlations \( \{r (42)= .08, P=. 12\}; \{r (56)= .10, P=. 43\}\) between integrative motivation of the subjects and their academic achievement were observed. Similarly, the results obtained for degree of association between instrumental motivation and academic achievement \(\{r (42)= .01, P=. 99\}; \{r (56)= -.14, P=. 28\}\) revealed the same pattern. Table 4.11 summarises the findings.

**Table 4.11. Pearson’s Correlations between Motivation and TAACH (both groups)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>(r) TAACH M</th>
<th>(r) TAACH P</th>
<th>(r) TAACH B</th>
<th>(r) TAACH P</th>
</tr>
</thead>
<tbody>
<tr>
<td>M (Int)</td>
<td>.08</td>
<td>.12</td>
<td>.10</td>
<td>.43</td>
</tr>
<tr>
<td>M (Ins)</td>
<td>.01</td>
<td>.99</td>
<td>-.14</td>
<td>.28</td>
</tr>
<tr>
<td>M (Total)</td>
<td>.02</td>
<td>.91</td>
<td>.07</td>
<td>.63</td>
</tr>
</tbody>
</table>

**Key**
- M (Int): Integrative Motivation
- M (Ins): Instrumental Motivation
- M (Total): Total Motivation obtained through adding the scores in M (int) and M (ins)
- TAACH: Total Academic Achievement
- R: Correlation Coefficient

Therefore, although students with integrative motivation tended to show more correlation coefficient measures, in none of the dependent variables was this decisive.

Further evidence is provided in the last part of the tables above (Tables 4.10 and 4.11), once the correlation between overall motivation and each dependent variable is
figured out. In other words, the correlation coefficients computed on the degree of linearity between motivation indices and TLP as well as TAACH did not stand at a significant level.

As a result of these findings and in order to measure the effect of motivation indices on language proficiency and academic achievement, further linear regression analyses were carried out. This sort of analysis would allow the researcher to establish a final contribution of types of motivation (orientations) to success in EFL more confidently. Analysis of the regression results for each of the groups validated the finding that motivation indices could not be a strong predictor of additional language proficiency and academic achievement of the subjects in this context.

Table 4.12, explains the model built to examine the extent to which motivation orientations predict obtaining language proficiency among monolingual learners. The results show no statistically significant association between motivation and the language proficiency of monolinguals. The overall regression effect was not significant, F= .913, P>0.05, $r^2 = .067$. (The possible reasons why motivational directions were not significantly associated with additional language proficiency and academic achievement of the subjects are discussed in detail in the next section).

The same ANOVA analysis (Table 4.13) was performed in order to determine whether motivation indices could predict the monolingual group’s success as far as their academic achievement was concerned. Results ($F= .239, P>0.05, r^2 = .019$) showed the same trend as in the previous analysis, i.e. no significant association between the variables.
Table 4.12. ANOVA Model for TLP and Motivation (monolinguals)

<table>
<thead>
<tr>
<th>ANOVA&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS</td>
</tr>
<tr>
<td>Regression</td>
</tr>
<tr>
<td>Residual</td>
</tr>
</tbody>
</table>

a. Predictors: M (Int), M (Ins), M (Total)  
b. Dependent Variable: TLP

Coefficients<sup>a</sup>

<table>
<thead>
<tr>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>M(Int)</td>
<td>2.871</td>
<td>4.096</td>
<td>.241</td>
<td>.701</td>
</tr>
<tr>
<td>M(Ins)</td>
<td>.888</td>
<td>3.659</td>
<td>.047</td>
<td>.243</td>
</tr>
<tr>
<td>M(Total)</td>
<td>.139</td>
<td>4.032</td>
<td>.013</td>
<td>.034</td>
</tr>
</tbody>
</table>

a. Dependent Variable: TLP

Key
- M (Int): Integrative Motivation
- M (Ins): Instrumental Motivation
- M (Total): Total Motivation obtained through adding the scores in M (Int) and M (Ins)
- TLP: Total Language Proficiency
Table 4.13. ANOVA Model for ACH and Motivation (monolinguals)

ANOVA

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>Ms</th>
<th>F</th>
<th>P</th>
<th>R</th>
<th>R²</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>14.378</td>
<td>3</td>
<td>4.793</td>
<td></td>
<td>.239</td>
<td>.869a</td>
<td>.136a</td>
<td>.019</td>
</tr>
<tr>
<td>Residual</td>
<td>762.441</td>
<td>38</td>
<td>20.064</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: M (Int), M (Ins), M (Total)  
b. Dependent Variable: TAACH

Coefficients

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>M(Int)</td>
<td>.467</td>
<td>.558</td>
<td>.295</td>
<td>.838</td>
<td>.407</td>
</tr>
<tr>
<td>M(Ins)</td>
<td>.188</td>
<td>.498</td>
<td>.075</td>
<td>.378</td>
<td>.707</td>
</tr>
<tr>
<td>M(Total)</td>
<td>-.379</td>
<td>.549</td>
<td>-.259</td>
<td>-.689</td>
<td>.495</td>
</tr>
</tbody>
</table>

a. Dependent Variable: TAACH

Key

M (Int): Integrative Motivation  
M (ins): Instrumental Motivation  
M (Total): Total Motivation obtained through adding the scores in M (int) and M (ins)  
TAACH: Total Academic Achievement
The same procedures were applied to test predictability of language proficiency and academic achievement of bilingual participants when motivation orientations were entered into regression analysis. The observed overall regression effect summarised in Tables 4.14 and 4.15 indicated no association between motivation and language proficiency ($F = .883, P > 0.05, r^2 = .048$) nor motivation and academic achievement ($F = 1.259, P > 0.05, r^2 = .068$) of bilingual group. Tables 4.14 and 4.15 summarise the analysis of variances related to motivation, language proficiency and academic achievement among bilingual participants, respectively.

Consequently, it was assumed that in none of the groups the variances related to language proficiency and academic achievement were determined by motivational orientations. In other words, statistically speaking, the population means were equal when motivation as an independent variable was taken into consideration. This reminds us of what the mean scores of both groups in motivation indices (Table 3.3) implied: that the two groups can be placed almost at similar levels in terms of their motivation to learn English.
# Table 4.14. ANOVA Model for TLP and Motivation (bilinguals)

**ANOVA**

<table>
<thead>
<tr>
<th>SS</th>
<th>df</th>
<th>Ms</th>
<th>F</th>
<th>P</th>
<th>R</th>
<th>R2</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3483.126</td>
<td>3</td>
<td>1161.042</td>
<td>883</td>
<td>.456</td>
<td>.220</td>
<td>.048</td>
</tr>
<tr>
<td>Residual</td>
<td>68349.731</td>
<td>52</td>
<td>1314.418</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: M(Int), M(Ins), M(Total)  
b. Dependent Variable: TLP

**Coefficients**

<table>
<thead>
<tr>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>M(Int)</td>
<td>-3.456</td>
<td>3.745</td>
<td>-.314</td>
<td>-.923</td>
</tr>
<tr>
<td>M(Ins)</td>
<td>-4.655</td>
<td>4.422</td>
<td>-.261</td>
<td>-1.053</td>
</tr>
<tr>
<td>M(Total)</td>
<td>5.121</td>
<td>3.732</td>
<td>.566</td>
<td>1.372</td>
</tr>
</tbody>
</table>

a. Dependent Variable: TLP

**Key**

- **M (Int):** Integrative Motivation  
- **M (Ins):** Instrumental Motivation  
- **M (Total):** Total Motivation obtained through adding the scores in M (int) and M (ins)  
- **TLP:** Total Language Proficiency
### Table 4.15. ANOVA Model for TAACH and Motivation (bilinguals)

**ANOVA**

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>Ms</th>
<th>F</th>
<th>P</th>
<th>R</th>
<th>R2</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>63.928</td>
<td>3</td>
<td>21.309</td>
<td>1.259</td>
<td>.298</td>
<td>.260</td>
<td>.068</td>
<td>4.11424</td>
</tr>
<tr>
<td>Residual</td>
<td>880.201</td>
<td>52</td>
<td>16.927</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: M(Int).M(Ins).M(Total)

b. Dependent Variable: TAACH

### Coefficients

<table>
<thead>
<tr>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>M(Int)</td>
<td>-.371</td>
<td>-.294</td>
<td>- .874</td>
<td>.386</td>
</tr>
<tr>
<td>M(Ins)</td>
<td>-.883</td>
<td>-.432</td>
<td>-1.759</td>
<td>.084</td>
</tr>
<tr>
<td>M(Total)</td>
<td>.569</td>
<td>.548</td>
<td>1.342</td>
<td>.185</td>
</tr>
</tbody>
</table>

a. Dependent Variable: TAACH

### Key

- **M (Int)**: Integrative Motivation
- **M (Ins)**: Instrumental Motivation
- **M (Total)**: Total Motivation obtained through adding the scores in M (int) and M (ins)
- **TAACH**: Total Academic Achievement
4.3.3 Socio-economic Status

In this part of the analysis the key factors were three main socio-economic categories to which subjects belonged and the two dependent variables. The results obtained through establishing correlation between SES, the three social categories into which the subjects were divided, and the dependent variables may be viewed in Tables 4.16 and 4.17.

Taking the results from Table 4.16 one can detect a range of weak correlation coefficients \( \{ \rho (42) = 0.33, P = 0.12 \}; \{ \rho (56) = 0.02, P = 0.83 \} \) between total language proficiency and SES when the subjects' fathers' educational attainment has been taken as the criterion for social classification.

Table 4.16. Correlation between SES (Father) and TLP & TAACH (both groups)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>((\rho))TLP</th>
<th>P</th>
<th>((\rho))TAACH</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES (Father)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>42</td>
<td>0.33</td>
<td>0.12</td>
<td>0.09</td>
<td>0.56</td>
</tr>
<tr>
<td>B</td>
<td>56</td>
<td>0.02</td>
<td>0.83</td>
<td>-0.07</td>
<td>0.58</td>
</tr>
</tbody>
</table>

Key

\( \rho \): Correlation coefficient
TLP: Total Language Proficiency
TAACH: Total Academic Achievement
In the same way, the correlation coefficients established between the subjects' SES (father) and their academic achievement \( \{\rho(42)=.09, \ P=.56\} \); \{\rho(56)=-.07, \ P=.58\}, revealed no interaction between these two variables.

The same trend is manifested in Table 4.17 when the subjects’ mothers’ educational attainment was taken into account in assigning them into social categories. In other words, there was no significant relationship between SES (mother) of the two groups and (a) their language proficiency \( \{\rho(42)=.30, \ P=.14\} \); \{\rho (56)= .08, \ P=.52\}, (b) their academic achievement \( \{\rho(42)=-.12, \ P=.41 \} \) and \( \{\rho(56)=.11, \ P=.40\} \). Therefore, it was concluded that socio-economic status could not play a significant role in additional language learning of the subjects in the Iranian context.

Table 4.17. Spearman Rank Correlation between SES (mother) and TLP&TAACH (both groups)

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>( \rho )TLP</th>
<th>P</th>
<th>( \rho )TAACH</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES (Mother)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>42</td>
<td>.30</td>
<td>.14</td>
<td>-.12</td>
<td>.41</td>
</tr>
<tr>
<td>B</td>
<td>56</td>
<td>.08</td>
<td>.52</td>
<td>.11</td>
<td>.40</td>
</tr>
</tbody>
</table>

Key

\( \rho \): Correlation coefficient
TLP: Total Language Proficiency
TAACH: Total Academic Achievement
4.3.4 Within Group Analysis

In addition to analysing data to make comparisons between the two groups, it was important to make sure whether each dependent group's development in EFL proficiency and academic achievement has been statistically significant. Therefore, two questions were posed: (a) whether the mean scores the subjects achieved in terms of their overall language proficiency, including its sub-component skills and their academic achievement varied significantly in the course of three phases of investigation over two years and, (b) if this variability between the means was not due to chance or individual differences. This would lead to an increase in confidence regarding the design of the study. To achieve this goal, within-group analysis of data obtained for each group was carried out through paired samples t-test for each dependent group. The results from these series of analyses indicated that there was a significant variation between the mean scores the subjects achieved regarding the two dependent variables. See Tables 7-18 (Appendix E).

According to these data, both groups significantly developed in terms of their language proficiency and its component skills as well as their academic achievement. Moreover, the highly significant results of t-test analyses revealed that this progress has not been due to chance or individual differences. The only exception to these findings was the difference between the first and second phases of the study in terms of academic achievement when the bilinguals' development was not at a significant level, i.e. \( t(55) = -1.15, P = .25 \). See Table 18 (Appendix E). A clearer picture of the subjects' development in terms of their additional language proficiency including their mean scores in each language skill and academic achievement is illustrated in Figures 1 and 2 (Appendix E). The within-group results, thus, contributes to the sensitivity of the design of the study and allows the investigator to discuss the findings more confidently.
4.4 Discussion

This section presents an extended interpretation of the key findings from the present study. Overall, analyses of data obtained from the performance of the subjects on language proficiency tests and their academic achievement records presented in the first section of this chapter, lent considerable support to the main hypotheses posed at the start. Findings provided answers to the main research questions: first, Azeri Turkish/Persian bilinguality exercises a clearly significant effect in attaining knowledge of English as a foreign language and second, this effect involved all language skills except for writing proficiency. The findings concerning the writing skill are considered as a key result signifying that bilinguality may affect language skills differently depending on some sociolinguistic factors (e.g. active use of the language in social interactions). Otherwise stated, the positive effects of bilinguality do not necessarily involve all language skills and may happen under certain circumstances.

Further confirmation also emerged when the relationship between other independent individual, social and psychological variables and the dependent variables were accounted for.

On the whole, the general findings reported in sections 4.2.1 to 4.2.7, except for section 4.2.4 concerning the fourth hypothesis when the findings were marginal, added to the evidence contributed by many studies on bilingualism and third language acquisition/learning in Eastern contexts and some in Western contexts since the 1960s.
The interpretations are made with reference to previous research whenever this seems appropriate. The findings are discussed in the same order in which they are presented in section 1, i.e. in addition to general language proficiency, as it was important to find out which language skills bilinguality affects more, a distinction has been made between the interpretations corresponding to findings on general language proficiency in English and those related to every component language skill. Therefore, a general discussion related to the first hypothesis will be presented first and the explanations related to each language skill (hypotheses 2-7) will appear later.

Principal Findings

4.4.1 Hypothesis 1: General Language Proficiency

The first important finding of this study was that bilinguals compared to monolinguals achieved a higher level of language proficiency in English as a foreign language. This is comparable with those of Thomas (1988), Bild and Swain (1989), Cenoz & Valencia (1994), and Sanz (2000) who investigated the effects of bilinguality on third language proficiency achievement in various contexts. Thus, given the observed differences between monolinguals and bilinguals the findings of this study contribute to the generally held view that in the process of acquisition/learning of additional languages bilinguals are probably more efficient language learners compared with their monolinguals peers.

There are several possible explanations for this finding. A considerable body of evidence including that of Thomas (1988), Cenoz & Valencia (1994), Cenoz, (1996), and Lasagabaster (2000) now exists, which account for one of the best documented differences between bilinguals and monolinguals, namely, metalinguistic awareness, a cognitive aspect of third language learning. This affirms the argument that bilinguality is
an element that promotes metalinguistic awareness. In this respect, bilinguals may have a head start on their monolingual peers because their enhanced awareness about language leads to an analytic orientation towards the nature of languages. A bilingual can organise his language systems so that the possible confusion between their two languages is eliminated (Hamers & Blanc, 2000), this in turn leads to an enhancement in greater control of internal language processing (Bialystok, 1988). This ability of bilinguals to organise and control language systems efficiently helps them in performing language learning activities competently to attain higher levels of achievement.

Others have argued that advanced learning strategies may be responsible for the positive linguistic and academic outcomes of bilinguality (Cummins, 1984, Ringbom, 1987, Nayak and McLaughlin, 1989, Jessner, 1999, Cenoz & Jessner, 2000). Although, it is true that all language learners use strategies when learning other languages, the more successful ones, according to Oxford (1990: 199), use them “more consciously, more purposefully, more appropriately, and more frequently”. It is further argued that, these learning strategies contribute to the decrease of transfer and distracting role of irrelevant factors in language learning among the advantaged learners (Ringbom, 1987, Bialystok & Majumder, 1998). Hence, the expert learners’ efficient choice of strategies may influence their rate of acquisition/learning as well as their ultimate level of achievement.

Accordingly, the findings of this study may suggest that Azeri Turkish/Persian bilinguals as experienced language learners and probably skilled listeners, speakers, readers and writers may use different information processing strategies and techniques in learning EFL than do monolinguals who are learning a second language for the first time and may not be aware of these strategies in the initial stages of their learning (of English.)
One can also explain the bilinguals’ higher achievement in additional language proficiency in favour of the experiential enrichment hypothesis (Clyne, 1997, Cook, 1997) and the Dynamic Model of Multilingualism (Herdina & Jessner, 2002). In other words, as these two similar hypotheses propose, it seems that an Azeri Turkish/Persian bilingual’s access to a range of situations and experiences, not available to the monolinguals, has brought a qualitative change in their linguistic systems. By virtue of this advanced system, they are exposed to a series of developed cognitive skills (e.g. language learning skill, language management skills, etc.) that may put them at a general linguistic advantage.

4.4.2 Hypothesis 2: Listening Comprehension Proficiency
An assessment of data on the second hypothesis confirmed the idea that bilinguals can be better than monolinguals as far as listening comprehension proficiency in English as a foreign language is concerned in the specific bilingual setting in this study. The dominance of bilinguals over monolinguals in this investigation tends to confirm the results of studies on specific areas of language proficiency, e.g. listening comprehension in a third language including those of Wightman (1981), Cenoz & Valencia (1994), and Cenoz (1996), who reported advantages for bilinguals from different socio-linguistic settings. The findings are, also, compatible with those of scholars who have focused their attention on the cognitive advantages that bilinguality probably brings about in the individuals, as regards listening comprehension. This is evident in the studies that report significant advantages of bilinguality in terms of perceptual organization (Ricciardelli, 1992), perceptual discrimination (Enomoto, 1994) and episodic and semantic memory as well as better recall in action memory among Iranian bilinguals (Kormi-Nouri, et al 2003).
The findings concerning the second hypothesis may imply a property of linguistically experienced individuals that Galambos and Goldin-Meadow (1990) explain. It is the ability to manage the superficial levels of language structure more effectively. This ability is perhaps a matter of bilinguals being better able to store information (Lambert, 1981). It appears that the cognitive advantages of a bilingual enable him to integrate and organise the information of incoming utterances in an effective manner. One of these cognitive advantages that may explain the efficiency of bilinguals over monolinguals is their enhanced auditory memory, which Wei (2002) and Kormi-Nouri, et al (2003) consider an important cognitive ability and a positive factor in bilinguality. Wei relates auditory memory span for sounds to the ability to learn language. He makes an analogy from the learning of sound-codes like those used in telegraphy. It has been demonstrated that the span of auditory comprehending is the main difference between the beginner in telegraphy and the expert. The same also applies among experienced and inexperienced listeners as language learners. A bilingual may be able to keep more and more words in his memory before deciding on the meaning of an utterance. This cognitive flexibility and openness results in a possibility of loosening perceptual constraints (Albert & Obler, 1987) that brings about a better listener with a more competent memory system. This memory system, in turn, leads to better information processing strategies when the individual comes to cope with new linguistic situations and codes. It is, therefore, thought possible that mastery of more than one language influences a bilingual’s perceptual strategies and capacities.
4.4.3 Hypothesis 3: Reading Comprehension Proficiency

Regarding reading comprehension proficiency, interesting findings emerged from the 3 series of data collected in three phases of the study. The analyses showed that bilinguals performed better than monolinguals in reading comprehension tests. In addition, a closer examination of the data in the second, particularly the third phase of the study, implied that bilinguals’ improvement in terms of reading proficiency achievement was at a speedy rate as compared to monolinguals. These results replicate those obtained by Swain, Lapkin, Rowen, Hart (1990), Ricciardelli (1992), Valencia & Cenoz (1992), and Lasagabaster (2001) who have also confirmed that bilinguals perform better in tests of reading comprehension test.

Several explanations are possible for the positive connection between bilinguality and achievement as far as reading comprehension proficiency in a third language is involved. The findings may explain the notion that cognitive and metacognitive strategies, namely, ‘language monitor’ (Clyne, 2003) and ‘the processing skill component’ (Bialystok, 1988) experience a significant development in various degrees among bilinguals of various levels of proficiency. These strategies increase the potential for facilitation in language learning situations since, with the increase in number of the languages involved, as Clyne (2003) confirms, the functions of the monitor expand. These meta-componential abilities are viewed as especially relevant to performance in L2 reading comprehension activities (Phakiti, 2003), particularly earlier reading acquisition that leads to higher levels of academic achievement (Bialystok, 1988). An enhancement in the language management skill of the expert readers enables them to plan a common resource in the use of their language systems while they manage to keep the systems apart (Clyne, 1991, Herdina & Cenoz, 2000). This allows a good reader to check and eliminate transfer through
separating and crosschecking, thus, when these common monitoring functions are fulfilled, the number of performance errors is reduced and the misunderstandings are corrected. It can be inferred that the bilinguals’ enhanced monitoring strategies that entail checking; monitoring and evaluating their thinking and reading performance allow them to perform the given tasks more efficiently. It is also probable that they perform these tasks at a speedy rate (Ellis, 1994, Klein, 1995).

Some support for a higher performance of bilinguals in reading comprehension may be drawn from the view that advanced cognitive strategies that are directly related to the target language and world knowledge of the learners (Phakiti, 2003) allow them to construct meaning from text, and to perform the given tasks efficiently, through making predictions, translating, summarising, linking with prior knowledge or experience.

In addition, the findings corresponding to the reading achievement of the subjects provided some new evidence for the view that achievement in the literacy (academic) skill of reading in a third language, like English, is not entirely related to literacy in the first language. This repeats what Wagner and his associates (1989) report from a Moroccan context where learning to read in French as an L2 /L3 was unrelated to literacy in Arabic or Berber as first languages. The findings of this investigation as well as those of Wagner and his colleagues may, thus, highlight the role played by contextual factors when second and third language acquisition/learning takes place in bilingual settings. Accordingly, language use patterns of the bilingual subjects in this study as well as the socio-linguistic profile of this specific social context may suggest support for the proposal of such scholars as Troike (1984), Olshtain et al (1990), Morris (1992), and Errasti (2003) concerning the interface between active use of the languages one already knows and
gaining advantage when confronted with additional language acquisition/learning. Hence, it can be possibly maintained that apart from education, active use of the languages one knows in almost all contexts including family, community and peer groups may be a powerful factor in improving language processing strategies among bilingual individuals. Nevertheless, more research is necessary to analyse the influence of minority language use on third language learning.

The difference between bilinguals and monolinguals in reading comprehension performance can be partly attributed to bilinguals’ advanced listening comprehension ability, as well. The findings on the reading skill may offer an indirect confirmation of Durgunoglu’s (1997) view that listening and reading skills are closely related due to a common linguistic base for these two skills. Durgunoglu believes that phonological awareness plays an important role in the development of reading skills. He defines this type of metalinguistic awareness as the ability to hear the sub-segments such as phonemes and syllables, in the spoken language. He believes that if the individuals can notice the subcomponents of a spoken language, they will have less difficulty in mapping letters to these speech segments when they are learning to read.

Besides, the additive effects of the linguality factor in reading comprehension proficiency achievement can be attributed to the well-known correlation between size of vocabulary and bilingualism (Francis, 1999, Keshavarz & Astaneh, 2004) in the socio-linguistic context of Iran and vocabulary size and reading ability (Cummins, 1984, Troike, 1984, Baker& Jones, 1998). The main initiative is that the vocabulary size of bilingual individuals is related to a common aspect of bilingualism i.e. “knowledge of the world”
(Troić, 1984). In bilingual settings, this common aspect is believed to be affected by socio-cultural factors that raise opportunities in reading comprehension activities.

4.4.4 Hypothesis 4: Writing Proficiency

The fourth planned comparison examined the writing proficiency achievement of the two groups in English as a foreign language. A very different pattern and perhaps a clearer answer to the second series of questions posed earlier (i.e. whether bilinguality exerts the same effects on the four language skills) emerged when the data on writing proficiency was analysed. The results in all three phases demonstrated no significant differences between the two groups. This can be considered an outstanding finding, which signifies that bilinguality may affect language skills differently depending on some sociolinguistic factors (e.g. active use of the language in social interactions). Otherwise stated, the positive effects of bilinguality do not necessarily involve all language skills and may happen under certain circumstances.

In addition, this key finding expands our view on research on the issues related to bilingualism at a societal level and bilinguality at an individual level. It brings new areas of enquiry as far as bilinguality and additional language learning is involved.

Although the findings related to writing proficiency contradicted the outcomes of others such as Valencia & Cenoz (1992), Errasti (2003), they may be indirect confirmation of what these researchers have accounted for their findings, namely, the Threshold Hypothesis and the Interdependence Hypothesis (Cummins, 1976, 1979).
The lack of significant differences between the two groups in writing proficiency achievement suggests several possibilities. First, the results show the multidimensionality of English proficiency because it seems that the bilinguality factor has a greater influence on some skills (listening and reading in this study) than others. This is in accordance with Cenoz (1996), who found a stronger relationship between speaking and bilinguality rather than other skills. The same trend was also identified by Lasagabaster (2000) who reported stronger effects of bilinguality on reading and grammar and weaker effects on listening. These findings, then, seem to verify Ringbom's (1985) suggestion that bilinguality may affect the productive skills somewhat differently from the receptive skills. This can be partly explained by nature of the four language skills that may be affected differently at various stages of learning, and perhaps by different factors. For example, in the highly complex process of text generating the learner is required to spend possibly more than 5 years (Baker, 1993) and attain sufficient proficiency in the target language (Wang, 2003) to achieve better results. As a result, comparing the written production of two groups with different linguistic backgrounds at highly advanced levels seems to be more revealing than that of those of elementary and even intermediate levels of proficiency as was the case in this study.

Moreover, the findings appear to confirm the common notion that bilinguality exerts its influences on additional language learning under certain circumstances. On the other hand, the findings can be partly explained by the fact that various degrees of bilinguality and different socio-linguistic contexts (Lambert, 1981, Jessner, 1999, Errasti, 2003) may have different dispositional effects on bilingual individuals when they are confronted with learning a third language. This corroborates Lambert's (1981) and Cummins' (1986, 1996) view that the two languages involved in bilingual situations should be socially valued.
enough to be permitted to flourish as the languages of thought and expression. This bears out Cummins’ (1979) Interdependence Hypothesis concerning transfer of academic language skills across languages in all the three phases of investigation. In the bilingual context of Azerbaijan, although Azeri Turkish is a socially valued language of wider communication in almost all contexts, it is not used as a language of instruction to help its speakers to develop academic abilities in their first language. A lack of difference between the subjects’ writing proficiencies may, thus, be a function of a lack of formal training in the first language of the bilinguals. It seems that in this study the bilinguals’ bilinguality has been of no help to them in the productive skill of writing possibly because of no literacy in their first language. To explain these findings in terms of the Threshold Hypothesis (Cummins, 1976), on the other hand, as far as the complex academic skill of writing is involved, the Azeri Turkish/Persian bilinguals in this study have not reached, in their first language, a stage to manifest positive effects of their having two linguistic systems in their minds, even though they have reached native competence in aural-oral skills in Azeri Turkish and all the four language skills in Persian.

With regard to transfer of literacy skills (e.g. writing) among the languages known by a bilingual, one can also point to the generally held view (Odlin, 1989, Romaine, 1995) that these abilities in L1 and L2/L3 can affect each other when the languages are of the same writing system. Odlin (1989) proposes that there is little if any positive transfer aiding learning of English by Persian speakers because Persian uses a writing system very different from those of French and English (e.g. writing from right to left, and different alphabetic systems with no letters in common). Therefore, it is not surprising that there would be less of a relation between writing in Persian and writing in English.
Finally, the fact that bilinguals have performed similar to monolinguals in writing proficiency achievement may suggest another possibility that: similar to monolinguals, they might have resorted to their L2 (Persian) academic skills, at least, in terms of encoding or decoding (Odlin, 1989) to compose in a third language. This provides new evidence to Hamers & Blanc’s (2000), and Herdina & Jessner’s (2000) proposition that the Interdependence Hypothesis concerning transfer of academic skills across languages can be extended to the influence of L2 on L3. In other words, it can be tentatively stated that a similar relationship exists between a second language and a third one and probably even a fourth language so that different degrees of proficiency in a second language could affect the acquisition/learning of the third (or fourth) language. Consequently, it can be concluded that, contrary to the other skills, the complex process of writing to which the use of the first language is integral (Wang, 2003) requires bilinguals to develop academic skills in their first language to benefit from their bilinguality.

4.4.5 Hypothesis 5: Speaking Proficiency

The fifth hypothesis, which was supported in the second and third phases of the study, but not in the first phase, related to the speaking proficiency of the groups under investigation. Taking the findings into account in general, similar to listening comprehension and reading comprehension skills, the speaking proficiency of the subjects was also affected by the linguality factor. This is in accordance with other investigations focusing on conversational skills (Swain et al, 1990), Cummins (1991), Cenoz (1996), Jessner, (1997) and pragmatic and metapragmatic studies (Safont, 2003). These studies reported that bilingualism is strongly associated with speaking, even more than with other dimensions of language proficiency on some occasions. The findings can
be related to Jessner's (1997) position that bilinguals have a highly developed ability to communicate and interpret communication, and to the dynamic view of multilingualism suggested by Herdina & Jessner (2002). Several other interpretations can be made from these findings.

The findings, firstly, could be related to the heightened communicative sensitivity (Ben-Zeev, 1977, Harris & Nelson, 1992, Baker & Jones 1998) among the bilingual speakers that is identified as one of the communicative advantages of bilinguality. It is proposed that in a conversation act, bilinguals need to plan their speech from their language storage incorporating more than one language while trying to keep them apart. This balancing ability is a developed language management skill (Cenoz & Jessner, 2000), which is pointed out as a positive outcome of previous language-related cognitive processes. Through repeatedly switching to an appropriate language in various bilingual situations, the Azeri Turkish-Persian bilinguals appear to subconsciously develop a sensitivity of awareness to the communication needs of other speakers. For them, this sensitivity possibly brings about other useful aspect of being bilingual in communication. That is, by virtue of their previous language experiences, they are better listeners with increased tolerance (Fabbro, 1999) and more confidence in using English as a target language (Clyne, 2003).

Moreover, this greater sensitivity could account for the development of communicative competence and communicative methods (Grosjean, 1982, 1992; Clyne, 2003) particularly when third language acquisition is involved (Herdina & Jessner, 2002). It can be assumed that these methods have achieved an improvement in aural-oral skills of the bilinguals in this investigation and that this apparent higher level of flexibility, i.e. a
developed ability to communicate and interpret communication in conversation, acts as a potential gain for the bilinguals in managing to converse in English language more successfully.

Secondly, a close relationship between metalinguistic awareness and speaking can also provide an explanation for the findings in this study. The metalinguistic awareness of bilinguals may have played a facilitative role in their learning to communicate and actually communicating. This is in accordance with the findings of a study that Lasagabaster (2000) carried out confirming this strong relationship. It is assumed that as Gass (1983) posits, during conversation acts, bilinguals through conscious repairs keep the conversation from failing altogether when breakdown in communication takes place. In this regard, the data suggest that, if the benefits of being bilingual extend to metalinguistic development and henceforth speaking, these benefits would not be restricted to the more typical cases of balanced bilinguals, rather they would also apply to other bilingual situations like the one explored in this investigation.

The additive effects of bilingualism on the speaking skill could also be related to social and contextual elements in this specific context, which could create an additive cultural and social context. This view reflects the explanations provided to findings related to the third hypothesis that has already been presented in section 4.4.3.

The findings corresponding to the listening comprehension proficiency and speaking proficiency of the groups under investigation may be evidence for the availability of cross-linguistic strategies in the development of aural-oral proficiency skills in additional language learning, Cummins’ (1979) weak version of the Interdependence Hypothesis
concerning transfer of conversational skills across languages is, apparently, borne out by the findings.

4.4.6 Hypotheses 6,7: Academic Achievement and its Relation to Language Proficiency

Further support for all the findings and explanations presented so far emerged from additional analyses of the data related to the academic achievement of the two groups. The findings indicated that bilingual subjects attained a higher level of academic achievement in every phase of investigation. This may imply that bilinguals, in addition to language learning activities, are able to use their enhanced learning strategies in other learning situations. Support for this finding comes from the outcomes of the studies emphasising the advantage of bilinguals in various non-linguistic domains, such as academic achievement (Papapavlou, 1999), performing spatial tasks (McLeay, 2003) and cognitive tasks (Kormi-Nouri, et al 2003).

Furthermore, the outcome of analyses of the results related to the last hypothesis, i.e. hypothesis 7, might supply further proof for the conclusion reached above. In other words, the results, i.e. a stronger degree of association between additional language proficiency and academic achievement of the bilingual subjects may uncover the fact that in general learning tasks, bilinguals probably apply the same advanced strategies and use the same resources that help them to manage new language learning situations. However, this conclusion should be tentative until further content-based research on academic achievement has been undertaken.
Other findings

In this investigation an attempt was made to eliminate the affective role that some secondary variables (e.g. motivation, gender and SES) may play in the proficiency achievement of the EFL subjects. Although information elicited from the questionnaire was used to exclude from the study some of the subjects with regard to these secondary variables (e.g. 2 subjects identified as not motivated to learn EFL), additional data analyses were carried out for more confidence in terms of the results obtained. The results of correlational analyses revealed that these variables played a rather limited role in the EFL proficiency and academic achievement of the subjects. Among these findings explanation of those related to motivation is felt necessary.

According to correlational analyses as well as further regression analyses, the relationship between motivational indices and additional language learning did not prove to be at a significant level. In other words, motivational indices did not show up as an influential variable with respect to the dependent variables in this Iranian context.

The weak associations between motivational measures and success in English as a foreign language were in a similar line with those found in studies of Chihara & Oller (1978) and Olshtain, et al. (1990) who reported weak relationships between factors like motivation measures and attained EFL proficiency. These findings are somehow contrary to the existing literature that shows positive findings as regards motivation and success in additional language learning. The disparity existing between the findings of these studies especially in the present one might be partly explained by referring to the differences between a foreign language context of learning and a second language context of learning. It is believed that motivation is dynamic and is likely to vary according to
setting and context of learning (Chihara & Oller, 1978; Gardner, 1985; Ellis, 1994). Otherwise stated, some external (Lasagabaster, 1998) and internal factors (Kiziltepe, 2000) may bring about modifications in the degree of motivation and even new types of motivation. For example, it is assumed that research on these factors may yield different results depending on whether the subjects are in a context of the target language where it is spoken or from a group of subjects who are exposed to the target language only in a formal context.

Moreover, the apparent lack of an affective role played by motivational orientations in acquiring EFL proficiency and academic achievement in this study may be attributable to the fact that the subjects were questioned in terms of their motivation towards learning English only once in the beginning of the study when they had just started the challenge of learning a foreign language. It is thought possible that at this early stage of language learning the complexity of the task of learning a foreign language is too high to let the students set their targets and develop different types of attributes towards learning EFL. Consequently, given the diversity of the study context and levels of the subjects when they were studied, the most conservative interpretation would be that, in due course, as they experience success in EFL learning (Ellis, 1994), their motivation and even its new types (instrumental and integrative) may become a factor in learning.

Statistically speaking, the most important explanation for the weak correlations between motivational indices and the dependent variables, as the regression analyses results indicated, relates to the population means that were equal when motivation as an independent variable was taken into account. This, in fact, replicated what the mean scores of both groups in each motivation orientation implied (Table 3.3), and led to the
assumption that the subjects in the two groups were not much different in terms of their motivational levels and could be ranked almost similar in terms of their motivation to learn English. Therefore, the main objective of using motivation measures i.e. to set aside those who were not motivated either integratively or instrumentally and to place the subjects almost at the same level was finally met.

4.5 Synthesis

So far, the findings summarised in the first section of the present chapter, which were all based on statistically significant tests, added to the strength of the proposed hypotheses, with the exception of the fourth one. The fourth hypothesis predicted a significant difference between monolingual and bilingual EFL learners in terms of their writing proficiency. The findings demonstrated that Azeri Turkish-Persian bilingual learners of English as a foreign language developed better and faster than their monolingual peers in terms of additional language proficiency and academic achievement in English. In section 2, further interpretation of the findings with reference to the outcomes of previous studies and the existing theoretical schemes in literature evidenced the validity and reliability of these outcomes. Several explanations were provided with regard to the higher levels of proficiency and academic achievement of the bilingual group. It was pointed out that bilinguals might benefit from advanced learning strategies, enhanced metalinguistic awareness, and developed communicative methods by virtue of having access to two linguistic systems.

The findings may be convincing evidence for various theories and hypotheses outlined in the literature review. The fact that bilinguals were more effective in performing some language tasks may be considered as evidence supporting the concept of multicompetence.
(Cook, 1992). Otherwise stated, the differences found between the two groups may suggest that people with multicompetence may not be equivalent to two monolinguals rather they are a unique combination with different linguistic systems, which may help them in learning additional languages. Moreover, the findings seem to be consistent with the theories that advocate a dynamic process of language development where existing language systems show influence on developing ones, namely, the Dynamic Model of Multilingualism through which Herdina & Jessner (2002) emphasize positive cross-lingual transfer across the languages one knows. One can, therefore, highlight the fact that a person who uses two languages has access to a range of situations and experiences that are not available to the monolingual. He or she may have, as well, developed a flexible learning set as a result of switching languages and making use of two different perspectives. These judgements, therefore, add to the strength of several other hypotheses (e.g. experiential enrichment hypothesis and Switching Hypothesis) outlined in previous chapters.

This study expanded research into a new cohort, namely, adult EFL language learners, whereas, most studies have reported their findings mainly from children, as balanced bilinguals. It provided an opportunity to the researcher to study the possible effects of bilinguality on additional language learning from a new sociolinguistic context (i.e., Iran), which, to the author’s knowledge, has rarely been investigated. The novelty of this study is that, contrary to other investigations, that have pursued the issue in fairly similar contexts (for more details see synthesis in Chapter 2), it brought evidence from a diglossic sociolinguistic context where the second language, Persian, is the official language of instruction and the first language, Azeri Turkish, is the language of everyday communication. In this context, individuals ought to actively use both their languages according to the requirements of the society to communicate their needs. These
circumstances provide individuals with deep insights into their languages by virtue of a socio-linguistic optic on communication, rarely experienced by monolinguals (Lambert, 1981). Thus, it can be stated that active use of the native language in bilingual situations, even if there is no first language literacy instruction, can bring about advantages in the individual that are extended to other learning situations. This is possibly an implication of the significant role played by social factors (e.g. use and valorization of the languages in the social contexts, geographical and demographic distribution, institutional factors like regional and local government, religious and cultural organizations, commerce, and industry), rather than purely linguistic factors in language learning.

Another positive contribution of this study to existing knowledge is that it is twofold, studying two complementary aspects, i.e. the general aspect of language proficiency as well as the specific aspects of it, including the four language skills. Exploring the development of the subjects in every single language skill helped the researcher to demonstrate that the findings were within the framework of two fundamental hypotheses in research on bilingualism, namely, the Threshold Hypothesis and the Interdependence Hypothesis proposed by Cummins originally in 1976, 1979. A possible conclusion that seems to be clear from the findings corresponding to the aural and oral skills of listening and speaking is that conversational skills are interdependent across languages. In other words, the findings suggest that the cross-lingual transfer of skills cannot be limited only to academic skills. There are so many other skills in conversation (e.g. enhanced communicative sensitivity, developed communicative methods) and listening comprehension (e.g. integrating and organising incoming information efficiently, and enhanced auditory memory) that may be transferable to target language/s. This may provide support for the weak version of the Interdependence Hypothesis.
On the other hand, the key findings regarding the fourth hypothesis, in relation to the writing proficiency of the subjects, direct one's attention to the strong version of the Interdependence Hypothesis concerning cross-lingual transfer of academic skills. A tentative conclusion that seems to emerge from this finding is that literacy in previous languages, more probably L1 literacy, provides an underlying structure on which a bilingual builds additional literacy acquisition as far as the complex skill of writing is concerned. This means that bilinguals in this context, like many others in bilingual contexts (e.g. Belgium, Canada, Spain, etc.), should develop their academic skills through their home language in order to benefit from their bilinguality.

However, this conclusion cannot apply to the academic skill of reading comprehension, because this study presented sufficient explanation that the superior performance of bilinguals in reading comprehension might not have been necessarily a function of literacy in their first language, rather there are some other resources independent of literacy, namely, cognitive and sociolinguistic resources, available to a bilingual. This reiterates the view held by Wagner (1989), that the language of literacy instruction is not, in itself, a significant determinant of academic outcomes as far as reading comprehension is concerned. Thus, it can be purported that bilingual students with no literacy in their first language may have other rich experiences and understanding about languages to bring to their reading skills in additional language learning situations.

In summary, given the observed differences between bilinguals and monolinguals, one may come to a probable conclusion that, at least, in this specific context, having functional language ability in two languages can be regarded as an indicator of achievement and success in learning English as a third language. In other words,
although there may be some losses or gains in specific areas (e.g. writing proficiency), there are many advantages that the ability to use two complex language systems can bring to the individual. This is consistent with what Cummins (1976: 6) has asserted, that "the bilingual instrument is more complex and so more difficult to master, but once mastered, it may also have greater potential than the unilingual instrument for promoting cognitive growth".

However, it should be highlighted that the significant role that other individual, social, and psychological factors (e.g. motivation and its orientations) play in second language learning should never be underestimated. Although they appeared to be less effective in this context, it does not mean that these factors would have revealed the same results had they not been implemented as a way of holding the subjects similar to some extent.
CHAPTER FIVE

CONCLUSION

5.1 Introduction

The previous chapter discussed the significant findings obtained during two years of investigation. Consideration was given to how far these findings support or refute the relevant literature reviewed in Chapter 2. This chapter outlines the conclusive comments on what has been achieved so far, what the findings imply, and what could be done next. These remarks are presented in four sections. The first section briefly summarises the main outcomes of the study that the findings analysed in Chapter 4 revealed. The second section looks at the possible implications of these findings. These are presented in three subsections: implications for bilingual parents, educational policy makers, and EFL practitioners, respectively. A third section of this chapter lists some limitations that the researcher confronted during the investigation. Finally, the last section draws attention to possible future research and new fields of enquiry that may be made with regard to the central issue of research in question (i.e., the possible effects of bilinguality on additional language proficiency and academic achievement).

5.2 Summary of Main Findings

As stated earlier, this study aimed at finding the possible effects that bilinguality may exert on learning English as a foreign language. It was hypothesized that having experienced two previous languages (Azeri Turkish-Persian) might have some positive effects on the English language proficiency achievement of the Iranian bilingual EFL learners compared to their monolingual peers. In addition, in an attempt to find out whether bilinguality influences the four language skills (i.e., listening, reading, speaking
and writing) in the same way or differently, the researcher evaluated the results corresponding to each skill, separately. Overall, data analyses showed advantages for bilinguals over monolingual subjects in terms of general English language proficiency, while, some of their individual (linguistic background), social (socio-economic status), and psychological (motivation orientations) characteristics were similar. Additional support came from the findings corresponding to a higher level of overall academic achievement among bilingual EFL learners. This study showed bilingual third language learners to be more effective and advantaged language learners possibly by virtue of their enhanced metalinguistic awareness, advanced learning strategies, and improved communicative skills. In addition, findings corresponding to each of the four language skills led the researcher to arrive at a possible conclusion that bilinguality does affect the four language skills differently. In other words, the findings of the present study, particularly, those related to writing proficiency, provided evidence to the generally held view that bilinguality exerts its positive impacts on language learning under certain circumstances (Lambert, 1981; Cenoz, 2003).

5.3 Implications

So far, all the findings corresponding to the main hypotheses have been interpreted based on the wide-ranging ideas held in recent literature. Several conclusions and interpretations were also drawn from the explanations provided. If these interpretations and conclusions are correct, the findings, then, might have three useful implications for bilingual parents, educational policy makers, and EFL practitioners. However, one should bear in mind that these implications are hypothetical and need to be examined in real situations carefully, before they are implemented.
5.3.1 Implications for Bilingual Parents

The first and most obvious implication of these findings that may be of general benefit to parents is that they should not believe in the idea that bilinguality may have some negative effects on their children's growth socially, mentally, and academically. Rather, they should be made aware of the linguistic, cognitive and social potential that bilinguality may have for their children even in future learning. It is important to note that a bilingual family seems to be the best environment to raise bilingual children. Therefore, instead of avoiding bringing up their children bilingually, parents are encouraged to help their children to develop their basic conceptual thinking primarily in their first language, which is good for development of second language skills.

In this specific bilingual context, it is important for parents to let their children be exposed to the Azeri Turkish language both at and away from home, because they live in a bilingual community where constant interactions require individuals to be active bilinguals. Hence, parents are advised to rear bilingual children and make them aware that being bilingual may enhance their abilities in many ways in the long run.

Nowadays, in the bilingual regions of Iran, it is not easy to make a decision whether to bring up children bilingual or monolingual. There seems a possible solution, bilingual education, as a vital social factor that can be expected to motivate parents to help their children learn their heritage language more systematically. (This is explained in detail in the next section that deals with the second implication of the findings).
5.3.2 Implication for Educational Policy Makers

The conclusion that bilingual subjects are required to develop the literacy skill of writing in their first language to benefit from their bilinguality in the complex process of writing and, probably even more positive results in acquiring/learning other language skills, implies that they should learn literacy skills in the Azeri Turkish language alongside Persian as the national language of the society. This leads to an important and possibly contentious implication of the findings, i.e. the necessity for bilingual education, which is directed towards existing language policy in the Iranian Educational system.

As has been previously explained, Iranian children take their schooling only in the Persian language regardless of what their first language is, whereas about 26% of Iran’s population\(^{15}\) are Azeri Turkish speakers (http://www.lexisnexis.com/) located mostly in the bilingual regions in Northwest Iran. This number of Azeri Turkish speakers as well as the findings of this study suggest that educational policy makers should be more sensitive to the needs of students in bilingual regions. Policy makers should understand that developing proficiency in the first language, while, acquiring the national language is of great importance and try some ways that help to achieve this goal.

Sufficient support and school provision for the L1, more particularly at early stages, plays an integral role in learning, conceptual growth, and future achievements in additional language learning (Adler, 1977; Olshtain, et.al. 1990; Cummins, 1991). It is assumed that the first language is the language in which individuals are most capable of fully expressing themselves and in which they will most readily gain early academic skills. Therefore, to enable the Azeri Turkish population to further benefit from being bilingual,

\(^{15}\) According to the CIA World Fact book: prepared by the Central Intelligence Agency for the use of US Government officials (http://www.lexisnexis.com/) the population of Iran was 66,622,704 (July 2002 est).
it is recommended that policy makers take steps in order to promote the development of first language literacy, at least, in the elementary stages of schooling, probably best in the first five years of elementary school. Nurturing this type of bilinguality (full bilingualism\textsuperscript{16}) could be personal opportunities available for bilingual individuals (e.g. having equal access to the educational system and maintaining their heritage language). Furthermore, from a social point of view, it would help society benefit from enhanced linguistic resources in its political, economical, and international relations.

Obviously, then, the most sensible opportunity would be that of ‘Bilingual Education’ not only as a right for bilinguals, but also as a means of improving their potential both academically and cognitively. However, it should be remembered that the findings of this study provide no guidance on how bilingual education might work in the existing situation. In the meantime, introducing such an important procedure calls for profound scrutiny and caution with every step taken with due regard to the realities and constraints of this particular context.

5.3.3 Implications for EFL Practitioners

A general outcome of this study indicated that attaining higher levels of linguistic proficiency and academic achievement may be facilitated by some achievement strategies that expert learners resort to when they are engaged in learning English as a foreign language. This reveals that learners, before they begin learning language, need to be aware of some strategies that may help them in attaining higher levels of performance more efficiently in various language tasks. Therefore, in EFL situations training in

\textsuperscript{16} This term has been used as an equivalent for balanced bilingual which refers to someone whose mastery of two languages is roughly equivalent.
language learning strategies and their contribution to increasing learners' confidence (Consuelo, 2004) and beliefs in their learning strategies should not be underestimated.

A third implication would be, hence, for EFL teachers, who are the best sources for training students to learn how to learn and become good language learners. It is recommended that EFL teachers practise a variety of teaching techniques that promote degrees of metalinguistic awareness and various types of learning strategies. These strategies help learners extend their command in listening, reading, speaking, and writing in the target language.

A very common example of training language learning strategies would be the one that Oxford (1990) suggests. This entails introducing:

- memory strategies to aid the learner in entering and retrieving information when needed for communication;
- cognitive learning strategies for forming and revising internal mental models and receiving and producing messages in the target language;
- compensation strategies to overcome any gaps in the knowledge of the language; and finally,
- metacognitive strategies that help the learners exercise executive control through planning, arranging, focusing, and evaluating their own learning.

This implication, on the other hand, highlights the importance of attempts made so far by the Iranian EFL educational authorities to improve curriculum design and pedagogical practices in the teaching and learning of English as a foreign language. It would be desirable if the EFL authorities could make further improvements by integrating some supplementary courses into the EFL curriculum that train learners in language learning
skills. One step that seems to be useful is to focus on the language learning process and the learner themselves. In this case, specific courses like 'Learning to Learn English', and 'How to Be a More Successful English Language Learner' might be used in order to help EFL learners understand language learning processes better. In addition, these courses can aid the inexperienced learners to understand the nature of language, what language learning resources are available to them, and what learning strategies they might use to develop their EFL skills.

The same applies to some strategies to enhance phonological awareness as far as the findings related to the third hypothesis (reading comprehension proficiency) are concerned. These findings illustrate a dominant view that reading comprehension skills can be improved by enhancing phonological awareness, which is believed to reach higher levels among bilinguals. This is, specifically, very important in teaching EFL because the benefits of teaching procedures that incorporate phonological training have been shown in research. Regarding EFL instruction in Iranian universities, it seems reasonable to introduce courses like Phonology17, which aim at improving learners' phonological awareness, from the very beginning of EFL instruction. Training phonological awareness at this elementary stage of language learning may be valuable to the learner in terms of reading comprehension ability and certainly in other language skills like listening comprehension and speaking.

These suggestions direct one's attention to another important responsibility of the EFL Educational authorities, which is to train EFL instructors with a working and up-to-date knowledge of theories of first and second language acquisition and their implications for

17 According to the EFL curriculum this course is introduced in the second year of EFL instruction in the English Language Departments in the universities of Iran.
the EFL classroom. This is mainly possible through providing in-service training opportunities for teachers as well as chances for further and easy access to useful sources of information.

The next section points to a few limitations that are worth addressing, because they provide agendas for future research.

### 5.4 Limitations of the Study

This research does have some limitations some of which were inevitable on account of the nature of this longitudinal study. There were some time and place constraints as well as human factors that imposed practical limitations while the investigation was conducted. For instance, as the data collection procedure was planned to take place in three time phases, introducing any change in methodology or data collection procedures at later stages (e.g. phase two or three) involved going back to the first stage and that was impossible for the researcher. Another limiting factor was the issue of keeping the subjects and administrators interested while the research was performed, on the one hand, and attempting to reduce the problem of fatigue in terms of either taking or administering the tests, on the other. If these two important human factors had not been taken into account, they might have had some effects on the general outcomes. It is, therefore, important to be clear about limitations that became apparent during the progress of the research mostly due to the limiting factors mentioned above.

1. This study was a longitudinal survey on the performance of EFL subjects in language proficiency tests in the English Language Department of Urmia University, Iran. As already stated, data collection was accomplished through the same test, namely, the FCE test in three phases of investigation. In spite of the fact that there were time intervals of, at
least, 4 months between each test administration, repeating a test three times in two years may be expected to have some test effects on the subjects. It would have been more reliable if a parallel test were used in the second or third phase of the study. However, using any parallel instrument required the researcher to do pilot tests that was not possible taking into account the time and place constraints and the human factors previously stated.

2. The Academic achievement of the subjects was evaluated through consulting their academic records at the end of each semester. This may pinpoint another limitation with regard to obtaining reliable and valid data on the students' academic achievements. One might have arrived at sounder information if some standardised content-based tests or metalinguistic tests were utilised to this end. Nevertheless, once again it should be underlined that introducing, developing and piloting a series of new instruments was not within the scope of this study.

3. The third limitation of this study comes from the fact that everybody is bound to subjective decisions as far as teaching and testing in EFL are concerned. The teaching staff, the researcher's assistants, and the interviewers, well aware of second language research, had been persuaded to follow standard teaching and testing principles throughout the study. Despite the efforts that have been made (e.g. induction sessions, written guidelines presented in Appendix C, and the pilot study) to avoid planning, teaching and test construction on subjective views, particularly, among the instructors, it seems that subjectivity as an inevitable aspect of every testing procedure, might have affected the results. As an example, one can refer to the academic records of the subjects, which were, in fact, the final judgements of the university lecturers. The lecturers base their judgements on their own methods of teaching, testing and evaluations. Therefore,
the researcher, even though there is no definite evidence, should assume that some
decisions and choices made by the lecturers might have been under the influence of
subjective judgments.

4. From the beginning of this study (including the pilot study), the researcher had to
decrease the total number of subjects to 20 to participate in the interviews. This was due
to the fact that it was too time-consuming and practically impossible for the interviewers
to interview all subjects three times during the investigation. Therefore, as far as the
findings related to speaking proficiency are concerned, one should limit the results to the
existing context due to a small sample size.

5.5 Suggestions for Future Research
The last section of this chapter deals with some lines of enquiry that the author has
formed as suggestions for further research. Looking at possible differences between
various linguistic groups of EFL learners, with an emphasis on the following
perspectives, promises to be a rich area of research for those interested in issues related to
bilingualism.

1. An investigation which compares the EFL proficiency achievement of bilinguals with
different levels of bilinguality and educational training in their first language, can be
suggested as an alternative method. The findings of such a study in the Iranian context
may verify explanations presented for the findings in the present study, particularly those
corresponding to the literacy skill of writing. This type of investigation may include a
group of monolinguals compared with two groups of bilinguals: a group similar to those
used in the present investigation and another group of biliterate bilinguals, for example,
Armenian/Persian bilinguals who receive instruction in their first language as well as in
their second language. This will more clearly demonstrate whether it is bilinguality or biliteracy that may be the reason for the difference in the performances of bilinguals and monolinguals.

2. This study specifically focused on the linguistic performances of elementary to intermediate EFL students in the English Language Department of Urmia University. A similar extension of this study should include further research on more advanced students in the universities of other bilingual regions, especially, if other foreign languages like French, German, Russian, etc. are brought under investigation. This will reveal clearer representations of bilingualism Iran. And, perhaps investigating more advanced university students would yield useful information basically in terms of writing proficiency, which is proposed to be strongly connected to the level of proficiency attained in the target language.

3. In the beginning of this study, Kurdish/Persian bilinguals were eliminated from the research because they belonged to a different language family. In other words, it was thought that the similarity between Kurdish, Persian and English languages, as descendants of the Indo-European language family, would affect the findings. Whether this investigation gives the same result for Kurdish bilingual groups remains an unanswered question. It seems that another investigation, which takes into account the language typology factor, for example, one that compares the EFL proficiency achievement of Azeri Turkish/Persian bilinguals with that of Kurdish/Persian bilinguals, will be beneficial to find out more about the performance of those individuals from a similar language family.
4. In section 5.3.2, the necessity of implementing bilingual education, at least, in the first five years of elementary education in bilingual regions of Iran was clearly stated. In the meantime, it was emphasized that the issue needs to be further investigated in in-depth longitudinal case studies. This provides an excellent longitudinal research opportunity that will reveal how exactly full bilingualism will work in Iran’s context. This type of programme should be primarily completed in some selected schools with a bilingual model of education that incorporates simultaneous use of both Azeri Turkish and Persian languages in instruction. It can continue up to the end of year five, which is a transition stage to secondary school. At this transitional stage, children can be expected to have sufficiently developed the fundamental academic skills in Azeri Turkish as well as in Persian. However, it requires great effort and time from the educational authorities to assess monitoring and improving such an important policy. To carry out such programmes requires careful planning ahead, essentially in:

- setting well defined goals and objectives;
- training teachers who are proficient in two languages; and,
- having careful curriculum planning and instructional materials.

5. The conclusion that bilinguals turned out to be better readers than monolinguals was partly explained by referring to the close relationship claimed to exist between vocabulary size as well as phonological awareness and the reading comprehension of bilinguals. This means that there may be various degrees of relationship among the four language skills (e.g. listening and reading comprehension) with respect to the linguistic background the subjects possess. These predictions would be worth exploring in more controlled studies. For example, it would be very interesting to perform within-group studies to find out in which linguistic group such connection is stronger.
6. As already mentioned, one of the key findings in the present investigation was a lack of significant difference between the two groups in terms of their writing proficiency. It was speculated that there might not have been any positive transfer helping the learning of English among the EFL learners due to the difference between the writing systems of English and Persian languages (e.g. writing from right to left and a different alphabetic system). Therefore, the possible influences of writing systems of the languages one knows on learning additional languages constitute interesting research questions for future studies. This will lead to a better understanding of the possible effects of bilinguality as far as learning the academic skill of writing is concerned. In this respect, comparing written production of two groups of bilinguals in a foreign language with a writing system similar to Persian (e.g. Arabic) and another foreign language with a different writing system (e.g. French) may give useful results as to the effects of bilinguality on language learning.

7. Finally, the findings related to the writing proficiency of the subjects led to the argument that Cummins’ (1979) proposal of the Interdependence Hypothesis, i.e. the idea of transfer of skills across languages can be extended to the influence of second language on subsequent ones. However, no direct evidence was provided in favour of such an interrelationship. The possible extension of the Interdependence Hypothesis from L2 to L3/L4 requires future investigation that explores the degree of association between the individuals’ levels of linguistic performance in their second and third languages. For example, in the case of Iranian EFL students, such research may involve looking at the relationship between their text-generation skills, both in Persian and English.
The author would like to conclude this thesis with her view of bilinguality that is consistent with what Cook (1997: 293) affirms:

Although there may be some losses or gains in specific areas the overall system of the L2 user is more complex and has a greater range of uses. The payoffs or losses in other areas are outweighed by the ability to use two languages, with all the benefits this ability can bring to the individual and to society.
Appendix A: A variety of Notions on Bilingualism

Achieved /Adult/ Adolescent/ Late bilingual: someone who has become a bilingual later than childhood.

Additive /Ascendant bilingual: someone whose two languages combine in a complementary and enriching fashion and his ability to function in L2 is developing due to increased use.

Balanced bilingual/Ambilingual/ Equilingual: someone whose mastery of two languages is roughly equivalent.

Consecutive/Sequential/Successive bilingual: one whose L2 is added at a stage after the first has begun to develop.

Coordinate bilingual: someone whose two languages are learned in distinctively separate contexts.

Compound bilingual: one whose two languages are learned in merged contexts

Diagonal bilingual: a bilingual in a non-standard language and an unrelated standard language.

Dominant bilingual: someone with greater proficiency in one of his or her languages and uses it significantly more than the other Language(s).

Early/ Simultaneous/Infantile/Child bilingual/Ascribed bilingual.: someone who has acquired two languages early in childhood.

Functional / Productive bilingual: one who operates in two languages with or without full fluency for the task in hand. In other words, one who understands, speaks and possibly writes in two or more languages.

Receptive/Passive bilingual: someone who understands a second language, in either its spoken or written form, or both, but does not necessarily speak or write it.

School/Secondary bilingual: one whose second language has been added to L1 via instruction.

Semilingual: someone with insufficient knowledge of either language.

Subtractive/ Recessive bilingual someone whose second language is acquired at the expense of the aptitudes already acquired in the first language. The speaker begins to feel some difficulty in either understanding or expressing him or herself with ease, due to lack of use.
Appendix B: Background Information Questionnaire

Dear Student,

(Date Today .../.../2003)

The present study is on bilingualism, language proficiency and academic achievement. The accompanying test is only for research purposes, and has nothing to do with your academic achievements at the end of the term. All the information you provide will be kept confidential, and will be used only for research purpose. The researcher wishes to sincerely thank you in advance for your kind co-operation. The time and effort you spend in this regard are very much appreciated.

Instructions: Please Tick, circle and indicate the relevant responses to the items below; elaborate on your responses, where required.

Student Number: ..................................................................................................................

1. Gender: Male/Female

2. Age: a. 18-20 b. 21-24 c. 25-28

3. Parental information:

3.1. Educational Attainment:

Father:
 a. elementary b. guidance c. high school
d. university degrees (specify) e. others (specify)

Mother:
 a. elementary b. guidance c. high school
d. university degrees (specify) e. others (specify)

3.2. Occupation:

a. Father: .................................................................................................................................
b. Mother: .................................................................................................................................

4. What language/s do your parents speak?

a. Father: .................................................................................................................................
b. Mother: .................................................................................................................................

5. What languages do you address your parents? ..............................................................
6. What is your First Language?
A. Persian  b. Turkish  c. Kurdish  d. Others (specify)

7. What other language(s) do you use besides your first language?
  a. Persian  b. Turkish  c. Kurdish  d. Others (specify)
  c. No other languages known

8. How did you learn your second language (the one you mentioned in item 7)?
  a. In the family  b. In the community
  c. At school  d. Other ways (specify)

9. In what age did you learn your second language? ..............................................

10. Have you always used the two languages in parallel as means of communication?
    a. Yes  b. No

11. Can you produce complete, meaningful utterances in your second language?
    a. Yes  b. No

12. Can you use the two languages for daily communication in the community?
    a. Yes  b. No

13. Your English language experience:
    13.1. Have you ever taken any English classes/lessons before coming to the university?
        a. Yes  b. No

    13.2. Where?
        a. at home  b. at school
        c. in a private institution  d. other ways (specify)

    13.3. For how long? (Please, specify): .................................................................

    13.4. How would you assess your current competence in the English language?
        a. True Beginner  b. False Beginner
        c. Fair  d. Good
        e. Very Good  f. Excellent
14. Following is a statement with 5 possible answers. Please read each statement and give the reason why you are learning English according to the following scales: (5) strongly agree, (4) Agree, (3) No opinion, (2) Disagree, (1) strongly disagree

<table>
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<tr>
<th>Statement</th>
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<th>4</th>
<th>3</th>
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<tbody>
<tr>
<td>1. I am interested in the cultures of the English speaking countries</td>
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<td>2. Most of my favourite films are from English speaking cultures</td>
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<td>3. I will encourage my children to learn English.</td>
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<td>4. My future job requires a good competence in skills in English.</td>
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<td>5. I want to study in English speaking countries in the future.</td>
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<td>6. I learn English to pass examinations.</td>
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<td>7. I learn English because my parents want me to do so.</td>
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<td>8. English is the number one language in the world.</td>
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<td>10. I will be highly regarded person if I know English.</td>
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<td>11. I like the sounds of English.</td>
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15. Please indicate below, in order of mastery, all the languages you are capable of using (these may include Turkish, Persian, Kurdish, English, Arabic or any other language). Also tick (✓) the relevant skills you possess in each of the languages indicated.

<table>
<thead>
<tr>
<th>Language/s</th>
<th>Speaking</th>
<th>Listening</th>
<th>Reading</th>
<th>Writing</th>
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16. Indicate the relevant responses to the items below, using a tick (✓). There may be more than one choice.

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<tr>
<th></th>
<th>Turkish</th>
<th>Persian</th>
<th>Kurdish</th>
<th>English</th>
<th>Arabic</th>
<th>(Others)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Which language do you speak at home?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Which language/s do you speak in the community?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Which language/s do you speak with your peers?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Which language/s are the newspapers you usually read in?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Which language/s are the radio programmes you listen to?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Which language/s are the TV programmes you usually watch in?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. This part should be responded to only by Turkish-speaking students.

17.1. Have you ever received instruction in the Turkish language?
   a. Yes  
   b. No

17.2. If yes, who taught you?
   a. Parents
   b. Private teacher
   c. Institutions
   d. Others (please specify)

17.3. Where?
   a. At home
   b. In a private institution
   c. Others (please specify)

17.4. For how long were you taught Turkish?

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Email: s.modirkhamene@surrey.ac.uk  
Tel: +44 1483 682858
Appendix C: General Guidelines on Test Administration

Dear Colleague,

The test materials are intended to help the researcher obtain data for an investigation on the Possible Effects of Bilinguality on Additional Language Proficiency and Academic Achievement of the EFL Learners in the University of Urmia. Your cooperation, the time and effort you spend in administering these tests are highly appreciated. Following are some guidelines you are kindly requested to adhere to in administering the tests.

1. This study is to be conducted in three phases, i.e. June 2003; January 2004; and June 2004. Please make sure that every subsequent administration of the tests happens at almost the same conditions and settings as much as possible.

2. The test consists of four papers, i.e. reading comprehension pages 3-12 including four parts (1 hour and 15 minutes); writing pages 13-18 including two questions (1 hour 30 minutes); listening comprehension pages 29-36 including 4 parts (40 minutes); and speaking test pages 44-49 including 4 parts (15-20 minutes for every two participants).

3. Please administer the test in three separate but subsequent sessions. The reading paper should be administered first, followed by the other two papers, i.e. listening and writing a day later. For assessing the oral proficiency please make arrangement in advance for the students to attend the interviews and make sure that the interviews are all tape-recorded for future considerations. You are kindly requested to eliminate all other external sounds by choosing an appropriate Interview Room.
4. The third paper of the test, i.e. the Use of English is not included as the test materials. Therefore, pages 19-28 are omitted from the whole test material.

5. The speaking test is in a paired format (two examiners and two students). You are kindly requested to provide a controlled but friendly environment. In this test one examiner conducts the test and gives a global assessment of each student's performance. The other does not take part in the interaction but focuses only on listening to and making an assessment of the student's oral proficiency. Pages 43 and 50 of the test present some guidelines on preparing for the speaking test and a marking scheme for the oral proficiency test. Please refer to these pages to make interviews and the grading as much reliable as possible.

6. There is a questionnaire accompanied by the test that should be given to the students only once in the first phase of the study.

7. Please explain the purpose of the research and on behalf of the researcher thank students for completing the test.

8. Prior to administering each paper please explain (in Persian) a little about the structure of the tests and the length of time allotted for every paper and assure them that their grades are anonymous.

10. Explain to the students that this data collection is only for research purposes and ensure them that it has nothing to do with their academic records at the end of the year.

11. Please make sure that every participant writes his/her student number on the questionnaire as well as on the answer sheets related to every paper.
12. Please ask the students to answer all questions by ticking the boxes or by writing the appropriate answers.

13. Please do not hesitate to contact me if you come across any problems or questions. Your report and comments on any problem envisaged in test administration will contribute to the quality of this investigation.

Once again, thank you very much for your cooperation in this research. Without your help it would not be possible for the researcher to do it.

Kindest Regards

Sima Modirkhamene
### Appendix D: Group Statistics: Main Investigation

Table 1. Group Statistics: Total Language Proficiency (both groups)

<table>
<thead>
<tr>
<th>Score</th>
<th>Total Groups</th>
<th>Groups</th>
<th>Minimum</th>
<th>Maximum</th>
<th>SD</th>
<th>$S^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLP1</td>
<td>126</td>
<td>M</td>
<td>46.02</td>
<td>19</td>
<td>74</td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>51.41</td>
<td>18</td>
<td>78</td>
<td>12.6</td>
</tr>
<tr>
<td>TLP2</td>
<td>126</td>
<td>M</td>
<td>49.71</td>
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<td>80</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>55.67</td>
<td>26</td>
<td>81</td>
<td>12.5</td>
</tr>
<tr>
<td>TLP3</td>
<td>126</td>
<td>M</td>
<td>59.11</td>
<td>28</td>
<td>87</td>
<td>10.8</td>
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<tr>
<td></td>
<td></td>
<td>B</td>
<td>66.05</td>
<td>40</td>
<td>92</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Key
- M: Monolinguals
- B: Bilinguals
- TLP (1,2,3): Total Language Proficiency phases 1-3
<table>
<thead>
<tr>
<th>LCP</th>
<th>Total</th>
<th>Groups</th>
<th>x</th>
<th>Minimum</th>
<th>Maximum</th>
<th>SD</th>
<th>S²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>21</td>
<td>3.07</td>
<td>9.44</td>
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<td>LCP1</td>
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<td>13.05</td>
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<td>21</td>
<td>4.06</td>
<td>16.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>11.38</td>
<td>6</td>
<td>22</td>
<td>3.04</td>
<td>9.26</td>
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<tr>
<td>LCP2</td>
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<td>B</td>
<td>13.92</td>
<td>5</td>
<td>22</td>
<td>4.17</td>
<td>17.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>13.30</td>
<td>8</td>
<td>23</td>
<td>3.05</td>
<td>9.34</td>
</tr>
<tr>
<td>LCP3</td>
<td>30</td>
<td>B</td>
<td>15.80</td>
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<td>25</td>
<td>3.88</td>
<td>15.1</td>
</tr>
</tbody>
</table>

**Key**
- M: Monolinguals
- B: Bilinguals
- LCP (1, 2, 3): Listening Comprehension Proficiency phases 1-3
Table 3. Group Statistics: Reading Comprehension Proficiency (both groups)

<table>
<thead>
<tr>
<th>Total Groups</th>
<th>Score</th>
<th>Minimum</th>
<th>Maximum</th>
<th>SD</th>
<th>S²</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP1 56</td>
<td>M</td>
<td>17.71</td>
<td>5</td>
<td>35</td>
<td>7.33</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>20.78</td>
<td>9</td>
<td>39</td>
<td>7.40</td>
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<td>RCP2 56</td>
<td>M</td>
<td>20.19</td>
<td>8</td>
<td>37</td>
<td>6.88</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>23.69</td>
<td>11</td>
<td>40</td>
<td>6.94</td>
</tr>
<tr>
<td>RCP3 56</td>
<td>M</td>
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<td>12</td>
<td>39</td>
<td>6.68</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>28.64</td>
<td>17</td>
<td>43</td>
<td>6.61</td>
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</tbody>
</table>

Key

M: Monolinguals
B: Bilinguals
RCP (1, 2, 3): Reading Comprehension Proficiency phases 1-3
Table 4. Group Statistics: Speaking Proficiency (both groups)

<table>
<thead>
<tr>
<th>Score</th>
<th>Total</th>
<th>Groups</th>
<th>M</th>
<th>Minimum</th>
<th>Maximum</th>
<th>SD</th>
<th>S²</th>
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</thead>
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<tr>
<td>SP1 1</td>
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<td></td>
<td>18</td>
<td>24.5</td>
<td>5.28</td>
<td>27.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22.05</td>
<td>26</td>
<td>3.82</td>
<td>14.6</td>
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<td>SP2 2</td>
<td>40</td>
<td></td>
<td></td>
<td>19.50</td>
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<td></td>
<td></td>
<td>22.70</td>
<td>28</td>
<td>4.02</td>
<td>16.2</td>
</tr>
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<td>SP3 3</td>
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<td></td>
<td></td>
<td>22.30</td>
<td>28</td>
<td>4.21</td>
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<td></td>
<td></td>
<td>27.90</td>
<td>31</td>
<td>3.38</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Key
M: Monolinguals
B: Bilinguals
SP (1,2,3): Speaking Proficiency phases 1-3
Table 5. Group Statistics: Writing Proficiency (both groups)

<table>
<thead>
<tr>
<th>Total Groups</th>
<th>Score</th>
<th>Minimum</th>
<th>Maximum</th>
<th>SD</th>
<th>S²</th>
</tr>
</thead>
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<tr>
<td>WP1</td>
<td>M 40</td>
<td>17.52</td>
<td>6</td>
<td>28</td>
<td>4.92</td>
</tr>
<tr>
<td></td>
<td>B 17.57</td>
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<td>29</td>
<td>4.72</td>
<td>22.3</td>
</tr>
<tr>
<td>WP2</td>
<td>M 40</td>
<td>18.14</td>
<td>9</td>
<td>26</td>
<td>4.34</td>
</tr>
<tr>
<td></td>
<td>B 18.05</td>
<td>7</td>
<td>30</td>
<td>4.54</td>
<td>20.6</td>
</tr>
<tr>
<td>WP3</td>
<td>M 40</td>
<td>21.11</td>
<td>13</td>
<td>29</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td>B 21.60</td>
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<td>34</td>
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<td>16.9</td>
</tr>
</tbody>
</table>

Key
B: Bilinguals
M: Monolinguals
WP (1,2,3): Writing Proficiency phases 1-3
Table 6. Group Statistics: Academic Achievement (both groups)

<table>
<thead>
<tr>
<th>Total Groups</th>
<th>Score</th>
<th>Minimum</th>
<th>Maximum</th>
<th>SD</th>
<th>S²</th>
</tr>
</thead>
<tbody>
<tr>
<td>AACH1 20</td>
<td>M</td>
<td>14.03</td>
<td>11.1</td>
<td>18.1</td>
<td>1.70</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>14.86</td>
<td>11.3</td>
<td>17.5</td>
<td>1.69</td>
</tr>
<tr>
<td>AACH2 20</td>
<td>M</td>
<td>14.43</td>
<td>12</td>
<td>17.5</td>
<td>1.46</td>
</tr>
<tr>
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<td>B</td>
<td>15.04</td>
<td>12</td>
<td>18</td>
<td>1.41</td>
</tr>
<tr>
<td>AACH3 20</td>
<td>M</td>
<td>14.91</td>
<td>12.7</td>
<td>17.5</td>
<td>1.39</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>16.10</td>
<td>13.3</td>
<td>18.5</td>
<td>1.34</td>
</tr>
</tbody>
</table>

Key: B: Bilingual  M: Monolingual  AACH: Academic Achievement
Appendix E: Paired Samples t-test Results

Table 7. Total Language Proficiency: Paired Samples t-test Results (Monolinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>t obs</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLP1-TLP2</td>
<td>-3.69</td>
<td>2.94</td>
<td>41</td>
<td>-8.12</td>
<td>.001</td>
</tr>
<tr>
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<td>41</td>
<td>-20.66</td>
<td>.001</td>
</tr>
<tr>
<td>TLP2-TLP3</td>
<td>-9.40</td>
<td>2.93</td>
<td>41</td>
<td>-20.79</td>
<td>.001</td>
</tr>
</tbody>
</table>

Table 8. Total Language Proficiency: Paired Samples t-test Results (Bilinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>t obs</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLP1-TLP2</td>
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<td>55</td>
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<td>.001</td>
</tr>
<tr>
<td>TLP1-TLP3</td>
<td>-14.64</td>
<td>4.58</td>
<td>55</td>
<td>-23.89</td>
<td>.001</td>
</tr>
<tr>
<td>TLP2-TLP3</td>
<td>-10.37</td>
<td>2.85</td>
<td>55</td>
<td>-27.23</td>
<td>.001</td>
</tr>
</tbody>
</table>

Key

TLP (1, 2, 3): Total Language Proficiency phases 1-3
Table 9. Listening Comprehension Proficiency: Paired Samples t-test Results (Monolinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>$\bar{X}$</th>
<th>SD</th>
<th>df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCP1-LCP2</td>
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<td>41</td>
<td>-2.57</td>
<td>0.01</td>
</tr>
<tr>
<td>LCP1-LCP3</td>
<td>-2.52</td>
<td>1.92</td>
<td>41</td>
<td>-8.48</td>
<td>0.001</td>
</tr>
<tr>
<td>LCP2-LCP3</td>
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<td>1.32</td>
<td>41</td>
<td>-9.38</td>
<td>0.001</td>
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</table>

Table 10. Listening Comprehension Proficiency: Paired Samples t-test Results (Bilinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>$\bar{X}$</th>
<th>SD</th>
<th>Df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCP1-LCP2</td>
<td>-0.87</td>
<td>1.56</td>
<td>55</td>
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<td>-10.83</td>
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</tr>
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<td>-12.99</td>
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Key

LCP (1, 2, 3): Listening Comprehension Proficiency phases 1-3
### Table 11. Reading Comprehension Proficiency: Paired Samples t-test Results (Monolinguals)

<table>
<thead>
<tr>
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<th>SD</th>
<th>df</th>
<th>( t_{obs} )</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>.001</td>
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<td>RCP2-RCP3</td>
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</tr>
</tbody>
</table>

### Table 12. Reading Comprehension Proficiency: Paired Samples t-test Results (Bilinguals)

<table>
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<th>Paired Variables</th>
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<th>SD</th>
<th>Df</th>
<th>( t_{obs} )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP1-RCP2</td>
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<td>2.11</td>
<td>55</td>
<td>-10.33</td>
<td>.001</td>
</tr>
<tr>
<td>RCP1-RCP3</td>
<td>-7.85</td>
<td>3.10</td>
<td>55</td>
<td>-18.96</td>
<td>.001</td>
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<tr>
<td>RCP2-RCP3</td>
<td>-4.94</td>
<td>1.98</td>
<td>55</td>
<td>-18.64</td>
<td>.001</td>
</tr>
</tbody>
</table>

**Key**

RCP (1,2,3): Reading comprehension proficiency phases 1-3
Table 13. Writing Proficiency: Paired Samples t-test Results
(Monolinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>$\bar{x}$</th>
<th>SD</th>
<th>df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>WP1-WP2</td>
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<tr>
<td>WP1-WP3</td>
<td>-3.59</td>
<td>2.13</td>
<td>41</td>
<td>-10.93</td>
<td>.001</td>
</tr>
<tr>
<td>WP2-WP3</td>
<td>-2.97</td>
<td>1.33</td>
<td>41</td>
<td>-14.45</td>
<td>.001</td>
</tr>
</tbody>
</table>

Table 14. Writing Proficiency: Paired Samples t-test Results
(Bilinguals)

<table>
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<th>$\bar{x}$</th>
<th>SD</th>
<th>Df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>WP1-WP2</td>
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<td>1.48</td>
<td>55</td>
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<td>.001</td>
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<tr>
<td>WP1-WP3</td>
<td>-4.03</td>
<td>1.64</td>
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<td>-18.41</td>
<td>.001</td>
</tr>
<tr>
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</table>

Key

WP (1, 2, 3): Writing Proficiency phases 1-3
Table 15. Speaking Proficiency: Paired Samples t-test Results
(Monolinguals)

<table>
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<tr>
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<th>$\bar{X}$</th>
<th>SD</th>
<th>Df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP1-SP2</td>
<td>-1.50</td>
<td>.66</td>
<td>9</td>
<td>-7.11</td>
<td>.001</td>
</tr>
<tr>
<td>SP1-SP3</td>
<td>-4.3</td>
<td>1.54</td>
<td>9</td>
<td>-8.77</td>
<td>.001</td>
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<tr>
<td>SP2-SP3</td>
<td>-2.80</td>
<td>1.03</td>
<td>9</td>
<td>-8.57</td>
<td>.001</td>
</tr>
</tbody>
</table>

Table 16. Speaking Proficiency: Paired Samples t-test Results
(Bilinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>$\bar{X}$</th>
<th>SD</th>
<th>df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP1-SP2</td>
<td>-1.65</td>
<td>1.08</td>
<td>9</td>
<td>-4.82</td>
<td>.001</td>
</tr>
<tr>
<td>SP1-SP3</td>
<td>-5.85</td>
<td>2.01</td>
<td>9</td>
<td>-9.18</td>
<td>.001</td>
</tr>
<tr>
<td>SP2-SP3</td>
<td>-4.20</td>
<td>1.47</td>
<td>9</td>
<td>-9.00</td>
<td>.001</td>
</tr>
</tbody>
</table>

Key

SP (1, 2, 3): Speaking Proficiency phases 1-3
### Table 17. Academic Achievement: Paired Samples t-test Results (Monolinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>$\bar{x}$</th>
<th>SD</th>
<th>df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-0.39</td>
<td>1.001</td>
<td>41</td>
<td>-2.58</td>
<td>.01</td>
</tr>
<tr>
<td>AACH1-AACH3</td>
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<td>0.87</td>
<td>41</td>
<td>-6.59</td>
<td>.001</td>
</tr>
<tr>
<td>AACH2-AACH3</td>
<td>-0.46</td>
<td>0.51</td>
<td>41</td>
<td>-6.09</td>
<td>.001</td>
</tr>
</tbody>
</table>

### Table 18. Academic Achievement: Paired Samples t-test Results (Bilinguals)

<table>
<thead>
<tr>
<th>Paired Variables</th>
<th>$\bar{x}$</th>
<th>SD</th>
<th>df</th>
<th>$t_{obs}$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1.15</td>
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<td>-1.15</td>
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<tr>
<td>AACH1-AACH3</td>
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<td>0.72</td>
<td>55</td>
<td>-10.96</td>
<td>.001</td>
</tr>
</tbody>
</table>

**Key**

**AACH (1, 2, 3):** Academic achievement phases 1-3
Figure 1. Within Group Analysis: Variation of Mean Scores in the Three Phases (Monolinguals)

- RCP: Reading Comprehension Proficiency
- LCP: Listening Comprehension Proficiency
- WP: Writing Proficiency
- SP: Speaking Proficiency
- AACH: Academic Achievement
Figure 2. Within Group Analysis: Variation of Mean Scores in the Three Phases (Bilinguals)

RCP: Reading Comprehension Proficiency
LCP: Listening Comprehension Proficiency
WP: Writing Proficiency
SP: Speaking Proficiency
AACH: Academic Achievement
# Appendix F: Descriptive Statistics: Pilot Study

Table 19: Summary Descriptive Statistics for the Test Papers (pilot study)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>( S^2 )</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>36</td>
<td>35</td>
<td>19.28</td>
<td>7.86</td>
<td>61.86</td>
<td>5</td>
<td>36</td>
<td>31</td>
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<tr>
<td>Writing</td>
<td>36</td>
<td>2</td>
<td>16.58</td>
<td>6.71</td>
<td>45.05</td>
<td>5</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>Listening</td>
<td>36</td>
<td>30</td>
<td>11.53</td>
<td>4.99</td>
<td>24.94</td>
<td>4</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Speaking</td>
<td>20</td>
<td>NA*</td>
<td>20.02</td>
<td>4.95</td>
<td>24.47</td>
<td>11</td>
<td>26</td>
<td>15</td>
</tr>
</tbody>
</table>

*NA: Non-Applicable

N: Number of subjects

n: number of items in each paper

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References


NCBC Online Library: NCBC Home Page:


Some Websites Consulted
