

**Learnability of
Cultural Models through Authentic Materials:
Focus on
Metaphorical Competence and Conceptual Fluency**

by

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Abstract

This study investigated the effect of exposure to authentic and computer assisted language learning-based English materials on learners' metaphorical competence and conceptual fluency in Iranian foreign/second language (L2) classrooms. Previous studies of classroom-based L2 learning using standard coursebooks indicate that students can develop excellent degrees of linguistic and communicative competences in their target language, but their discourse lacks conceptual accuracy. While their discourse output may have a high degree of verbal (formal) fluency, lack of conceptual fluency creates both comprehension and production misunderstandings and inappropriateness. For this research, in an effort to better understand and even remedy the problem, 53 Persian learners of English in Iran were divided into two groups and took part in the following experiment. Textbook-based materials were used with a control group while authentic materials and instruction by trained native speakers as online teachers were employed in the treatment class through the mediation of computer assisted language learning techniques. Qualitative and quantitative data were collected based on questionnaires as well as pre-, post- and delayed post-tests. Both control and experimental groups improved in their English language proficiency based on the statistical main effects. The results of the study at the post-test stage also showed that L2 learners' written and oral discourses had a more improved level of conceptual skill and metaphorical structure after being exposed to the authentic materials compared to the control group. This claim is based on the significant difference between the textbook-based and authentically-based approaches reflected in the data analyses. Delayed post-test data analysis showed differences between oral and written discourses. Oral discourse metaphorical density fell back to a limited extent though still degrees of improvement were visible. Participants in the experimental group produced less marked discourse with a higher metaphorical density. Also, the study indicated that conceptual fluency and metaphorical competence are two related phenomena and the development of each influences the other.

Keywords: English teaching in Iran; metaphorical competence in the EFL classroom; conceptual skills in the EFL classroom; marked/unmarked discourse; authentic material in the EFL classroom

To my parents, my wife, and my siblings

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List of Acronyms

CALL	Computer-assisted language learning
EFL	English as a foreign language
OMD	Oral discourse metaphor density
WMD	Written discourse metaphor density
SCT	Sociocultural theory
SLA	Second language acquisition

Glossary

Authentic materials	“Materials that have been produced to fulfill some social purpose in the language community” (Peacock 1997: 146).
Conceptual fluency	“Conceptual fluency is the ability to use and comprehend the conceptual concepts of a given language. To be conceptually fluent in a language is to know how that language reflects or encodes its concepts on the basis of metaphorical reasoning” (Danesi 1995: 5).
Linguistic metaphor	Refers to metaphors that are found in language use. A linguistic metaphor is signalled to the researcher by the arrival of ‘something else’, as Burke put it – “a word or phrase which contrasts with the meaning of the discourse at that point” (Burke 1945: 4). “Linguistic metaphor in an operational sense is defined as words or phrases that can be justified as somehow anomalous, incongruent or ‘alien’ in the ongoing discourse, but that can be made sense of through a transfer of meaning in the context” (Cameron & Maslen 2010: 102).
Non-authentic materials	“Materials produced specifically for language learners, e.g. exercises found in coursebooks and supplementary materials” (Peacock 1997: 144).
Marked/unmarked	“A marked form is a form that occurs in fewer contexts and is therefore cognitively more salient when it does occur. The mind builds conceptual categories from the most common and frequent elements that occur in the perceived environment” (Danesi 1993: 135).
Markedness	The degree of inappropriateness in which L1 concepts are carried by L2 structures and words (Danesi 1993).
Metaphor	“A device for seeing something in terms of something else” (Burke 1945: 503).
Metaphorical competence	“The ability to understand and use metaphors in natural communication. The programming of discourse in metaphorical ways is a basic feature of native-speaker competence. It underlies conceptual fluency. As a competence, it can be thought about pedagogically in ways that are parallel to the other competencies that SLT has traditionally focused on (grammatical and communicative)” (Danesi 1993: 493).
Metaphorical density	The number of metaphorical words or phrases in a 250-word text. Repeated metaphors are not counted.
Primary meaning	To identify metaphors in the text, the following definition and characteristics are delineated: “Primary or basic meanings tend to be more concrete, related to bodily action, more precise (as opposed to vague), and historically older. Primary or basic meanings are not necessarily the most frequent meanings of the words or phrases” (Cameron & Maslen 2010: 106).
Sociocultural theory	“A theory of mediated mental development, it is most compatible with theories of language that focus on communication, cognition, and meaning rather than on formalist positions that privilege structure” (Lantolf & Thorne 2006: 3).

1. Introduction

Learners in EFL settings often emerge from their studies still lacking conceptual fluency, accuracy, and naturalness. Lack of conceptual fluency in L2 learner's discourse is defined as L2 learners speaking or writing with the formal structures of the English language but thinking in terms of their L1 conceptual system. In other words, L2 learners use English words and structures as carriers of their own L1 concepts. Various studies in EFL classrooms in Iran conform with this generalization (Hashemian & Talebinezhad 2007; Norafkan 2000; Talebinezhad & Sadeghi 2005).

A true story from Hwang (2008) illustrates, in general terms, the gap between real world English and classroom English based on textbooks. It displays the EFL speakers' need to understand the full meaning of discourse and real-world English expression.

The tragedy took place in the U.S. in 1992 when Hattori Yoshihiro, a Japanese exchange student, went to a Halloween party at a friend's house. Yoshihiro, who was wearing a Halloween costume, did not exactly remember his friend's address and approached a neighboring house. Rodney Peairs, the owner of this house, was alarmed when Yoshihiro appeared on his doorstep, and the homeowner pulled out a gun. He yelled "Freeze!" several times. Unfortunately, Mr. Peairs was completely unaware that behind the mask was somebody who would only have understood "Stop!" as a command to cease all motion; "Freeze!" was incomprehensible to Yoshihiro. The exchange student kept walking, and Peairs fired. Yoshihiro, who had gone through years of English studies, was killed because he was familiar only with textbook English. (Hwang 2008: 1)

He was unable to understand the meaning of the exclamation 'Freeze'. Such misinterpretations and misunderstandings by L2 learners in classroom SLA are not rare.

Researchers insist that language learners need to be exposed directly to the target language through authentic interaction (Lantolf & Thorne 2006). Application of approaches and methods by which conceptual skills are developed in the second

language classroom assists students in producing more natural discourse in a conceptually accurate manner (Danesi 2003b; Danesi & Mollica 1998; Lantolf & Thorne 2006).

Hwang (2008) believes it is essential that EFL classrooms expose learners to English as it is used in the real world, pragmatically, by native speakers. Most importantly, she argues that authentic texts are needed in the EFL classroom to make students more aware of the realities of language use.

1.1. Motivation for the present study

My experience of over 18 years teaching English confirms Danesi's (2003b) observation regarding the failure of EFL classrooms in conceptual skills development. I have observed English language classes both in public schools and private language institutes in Iran and the previous research accords with my observation that language learners and EFL teachers are not satisfied with the language proficiency learners acquire in coursebook-based classrooms (Hashemian & Talebinezhad 2007; Norafkan 2000, 2010; Talebinezhad & Sadeghi 2005). Students rarely achieve high levels of proficiency in terms of conceptual skills. No matter how long they study English in such EFL classrooms or what coursebook is the dominant resource for language teachers. Learners' discourse, whether written or spoken, lacks the expected conceptual fluency. This leads to misunderstanding and ambiguity in their interactions with English speakers. Learning more ways to develop conceptual skills in the classroom setting stands as the main motivation for this study.

1.2. Statement of the problem

The problems that learners of a second or foreign language experience in expressing themselves are not solely rooted in a lack of linguistic or even communicative knowledge. Mastering the structure and the vocabulary of a language does not mean one is able to communicate in that language. An area where language learners face

problems even in the so-called advanced stages is the area of conceptual skills and metaphorical language (Charteris-Black 2003; Talebinezhad & Vahid 2002).

Researchers have shown that unnaturalness in speech produced by language learners cannot be solely the result of grammatical and/or communicative deficiencies (Danesi 1994; Hashemian & Talebinezhad 2007). Both of these kinds of knowledge (grammatical and communicative) are aspects of verbal fluency. Student-produced discourse usually shows an excellent degree of verbal fluency while it lacks the conceptual accuracy and appropriateness that native speakers' corresponding discourse has. In fact, students speak or write with the formal structures of the English language, but they think in terms of their L1 conceptual system (Farsi, in the case of Iranian learners of English). This means that students use English language words and structures, but the concept applied originates from the learner's L1 (Danesi 1999; Hashemian & Talebinezhad 2007). When the structure of the concepts in both languages is identical, the students' discourse seems culturally-appropriate. But when they are not, the students' discourse displays an asymmetry between language form and conceptual content. The student discourse lacks conceptual fluency (Danesi 1999).

Each language has specific concepts that are culturally formed. Many expressions are contextually used word strings which are conceptual as well. For example, I can give you a conceptual error one Iranian student had in English class. In Farsi, the expression 'Ghorbunet beram' which means 'I die for you' or in other contexts 'I sacrifice myself for you' is used in several situations depending on the concept the speaker needs to convey. Among all the cultural concepts it conveys in Farsi, only one of them is identical to English which is expressing love to someone. To illustrate, I note some of the situations in which the expression 'Ghorbnet beram' is used in Farsi:

- As given above, it is used when someone expresses love to his/her beloved (the translation of the expression suggests an identical concept in English).
- When a mother intends to show her emotion and caring for her child (the translation in English does not suggest an identical concept).
- When someone is willing to thank someone else in a friendly manner (the translation in English does not suggest an identical concept).

My student used the English translation of the expression 'Ghorbunet beram' erroneously to thank his classmate assuming that the expression 'I die for you' carries all concepts belonging to 'Ghorbunet beram'. The native speakers of language have identical conceptualization skills while the learners of the language who are excellent at production of complicated structures do not succeed at producing or understanding conceptual messages due to pragmatic incompetence. Differences in cross-cultural discourse are the major cause of the failure (Hwang 2008; Tyler 1995).

A question which might be raised here is why Persian learners of English need to develop conceptual fluency in English if communication is satisfied through the linguistic and communicative competence. The fact is that in many cases English with an acceptable level of conceptual fluency is required to fulfill learners' needs and demands.

1.3. Purpose of the study

This study hypothesizes that conceptual skill development can be facilitated in the EFL classroom among Persian learners of English through computer-assisted language learning (CALL) techniques. CALL techniques have been used to bring authentic English to classrooms as a reliable source to convey metaphorical and conceptual skills. The study investigates whether learners' exposure to authentic English can assist Persian learners of English with the development of conceptual skills in a classroom setting.

Cognitive and social studies have shown that conceptual fluency in a language requires the learner to know how language concepts are encoded on the basis of metaphorical reasoning (Danesi 1999, 2003b). Gibbs (1994) agrees with Danesi that metaphor is at the basis of abstract thought and common discourse although the learner may not be aware of its presence (Cieślicka & Singleton 2004). Gibbs (1998, 2001) notes that most linguistic metaphors convert the underlying metaphorical construct which is a part of the human conceptual system. "Linguistic metaphors are motivated by conceptual metaphors and are the realizations that appear in everyday written and spoken forms. For example, the conceptual metaphor LIFE (target) IS A JOURNEY (source)

motivates common linguistic metaphors such as we're on the right (wrong) track (path) ..." (Bailey 2003: 59-60).

Metaphor is used to think, to explain ideas to others, and to organize speech. Through each metaphor selection, communication is carried on and speakers introduce conceptualizations and attitudes (Cameron 2008). In other words, speakers select the metaphor to direct and pursue communicative goals through the facilities of the conceptual system provided by metaphorical language.

It is essential that second language instruction expose learners to authentic English, and in turn, provide them with the opportunity to develop the required interaction skills with English speakers (Hwang 2008). The application of relevant CALL techniques, particularly in classroom SLA, can expand their experiences of the target language. Learners can know of native speakers' real life and use materials developed for native speakers. Such experience can promote the acquisition of conceptual fluency.

1.4. Significance of the study

SLA researchers (Cook 1993; Ellis 1986, 1994; Gass & Selinker 1994) have discussed in detail L2 learners' acquisition of L2. However, they are mostly silent on the subject of metaphor (Danesi 1992; Low 1988). If conceptual skills development and the role of metaphorical competence in everyday language are as important as other studies have shown, then mastery of such skills should not be less important than that of other areas of language learning.

On the topic of metaphor teachability, different studies have led to positive conclusions (Danesi 1993) and less than positive conclusions (Boers 2000). Valeva (1996) raises the question whether an L2 metaphorical system is in fact learnable. In this connection, Danesi (1999) and Hwang (2008) believe that if the proper materials and pedagogical practices are utilized, conceptual fluency and metaphorical competence are effectively achievable in the classroom. In the real world, cross-cultural mismatches can lead to communication breakdown through language that is grammatically correct but pragmatically ambiguous or incorrect. Exposure and familiarity with the target language

and higher levels of pragmatic awareness can reduce the L1 to L2 social distance (Hwang 2008).

Metaphorical thinking and metaphorical language are not marginal processes; they are at the very heart of everyday mental and linguistic activity (Haris, 1981; Lakoff & Johnson 1980b). Winner (1982) comments that without metaphor human communication would be seriously limited. Metaphors are frequently encountered in daily contexts, and studying them supports communication. Moreover, metaphors help learners raise their awareness of key concepts in a language (Cameron 2003; Littlemore 2005). The relation between concrete and abstract concepts is the first step through which communicators introduce and use abstract concepts in their discourse. The abstract concepts or conceptual metaphors made based on this relation are very significant in understanding and transferring meaning in discourse. Lakoff and Johnson (1980b) discuss two kinds of concepts in metaphor. Concrete and abstract concepts are the two categories: abstract concepts are created from concrete ones in a systematic way. Language learners' familiarity and awareness of the concepts and how they are linked is crucial in avoiding misunderstanding and pragmatic ambiguity. Also, conceptual metaphors (derived from abstract concepts) stand at a higher level than linguistic metaphors as note by Bailey (2003) who describes this relation. He states that conceptual metaphor and linguistic metaphor are the two levels of metaphor (Lakoff & Johnson 1980b).

We talk about things the way we conceive of them, and this is fashioned through and grounded in experience and culture.... Conceptual metaphors are super-ordinate, epistemic and semantic mappings that take the form of TARGET DOMAIN IS/AS SOURCE DOMAIN. (Bailey 2003: 59-60)

Conceptual metaphors are the source of linguistic metaphors and both appear in everyday written and spoken forms. Another example from Bailey (2003) introduces the conceptual metaphor LIFE (target) IS A JOURNEY (source) which motivates common linguistic metaphors such as "we've come too far down this road to turn back now, he's looking for a change of direction (p. 60). Apart from the relation between these two levels, many such metaphors become conventionalized, and this highlights the role of concept awareness in second language learning. A conventional metaphor is one that is commonly used in everyday language in a culture to give structure to some portion of

that culture's conceptual system. Conventional sets of metaphorical expressions such as "I have never won an argument with him" and "your claims are indefensible" (Lakoff & Johnson 1980: 4) are observed as linguistic realizations of conventional conceptual metaphor: ARGUMENT IS WAR (cf. Lakoff & Johnson 1980). Abstract concepts become conventionalized through daily usage and lose their relation to the concrete concept which previously existed for them (Danesi 2003b). At this stage they stand as concepts that need to be acquired by language learners to give them a wider conceptual awareness.

From the viewpoint of language, culture and cognitive linguistics, language learning is not only acquiring new signifiers. Depending on the learner's L1, language learning involves the process of acquiring and modifying conceptual knowledge. The new knowledge needs to be acquired and the already existing knowledge may need modification. All this is a way to reconstruct mediation channels for interaction with the world (Lantolf & Thorne 2006). Acquisition of metaphor or the modification of existing metaphorical knowledge depend on the social and historical relation between L1 and L2 (L1 is the mother tongue and L2 is the target language). Language learners need to manage these according to the cultural concepts they have for their L1 and L2.

Hwang (2008) introduces the difference in culture and its frame of conceptualization between Asian and Western countries and the excessive dependency of language learning on EFL textbooks. But attention should be paid to pragmatics in EFL classes in Asia (Spencer-Oatey & Xing 2000), and this can be done through L2 authentic materials (Hwang 2008).

Lantolf and Thorne (2006) conclude that conceptual metaphors are culturally structured models responsible for forming the relevant experiences that appear when interlocutors do not share the same culture, knowledge, values, and assumptions. Under these circumstances mutual understanding can be especially difficult. Such understanding is possible through the negotiation of meaning. "To negotiate meaning with someone, you have to become aware of and respect both the differences in your backgrounds and when these differences are important. You need patience and a generous tolerance for mistakes, as well as a talent for finding the right metaphor to

communicate the relevant parts of unshared experiences or highlight the shared experiences while deemphasizing the others" (Lakoff & Johnson 1980b: 56).

Context and its content play an important role in the process of language learning. The language learner requires exposure to real interaction through authentic and original context rather than through artificial, planned, and in some cases simplified context which deprive the language learner of meaningful engagement. If language learners are kept distant from what they require to access higher levels of language proficiency, how good can a learning procedure really be? People seem to develop higher levels of proficiency when they get involved in the cultures of the communities that speak the language than they do by being exposed to the language in classroom settings. The reason is that learning a language in its natural context allows the student to interrelate its forms and uses to the broader conceptual system to which it is tied (Danesi 2003b). Each language is designed to encode concepts in different ways. The more distant the cultural and historical relation between languages, the greater the conceptual differences between them (Danesi 2003b). Language learning is not just articulating sounds and using new word-making patterns to communicate something. It involves, rather, learning how linguistic, nonverbal and conceptual systems interact.

Regarding the notion of metaphorical competence, Low (2008) claims that few would reject the necessity of L2 learners' need for metaphorical competence development. The hard part is how to achieve it. Accordingly, this study investigates how EFL learners' exposure to authentic sources of English can support their development of metaphorical competence

1.5. Theoretical basis

Although Vygotsky's work originates in psychology, its significance has contributed to various knowledge disciplines. Vygotsky's sociocultural theory has received different interpretations in the past few decades such as in theories of cognition (Luria 1981), education (Bruner 1985), language development (Bronckart 1995), semiotics (Rommetveit 1985), and human development (Wertsch 1995). The human

cannot be separated from the social context. In this way, cognitive development is taken particularly as a social and cultural activity (Erben, Ban, & Castandena 2009).

Vygotskian cultural-historical psychology, often called sociocultural theory in applied linguistics and SLA, offers a framework through which cognition can be systematically investigated without isolating it from social context....The relationships between human mental functioning and the activities of everyday life are both many and highly consequential. Participation in culturally organized practices, life-long involvement in a variety of institutions, and humans' ubiquitous use of tools and artifacts (including language) strongly and qualitatively impact cognitive development and functioning. (Lantolf & Thorne 2006:1)

Language and thought are linked. Sociocultural theory adopts a dialectic approach of mind. This means that it does not make a distinction between body and mind. As Ilyenkov (1977) puts it, thinking does not exist independently of mind, "but is instead a mode of existence of the body itself. Just as the mode of action of the legs is walking, the mode of action of the human is thinking"(p. 35). Vygotsky proposes that human consciousness emerges from the dialectic unity of human's biologically endowed brains and his/her culturally created activities. Humans develop the skills for using cultural means in order to have control over the brain (Lantolf & Poehner 2008).

Lantolf and Thorne (2006) report that different disciplines have illustrated and advocated the strong connection between language, culture, and cognition. This connection is undoubtedly applied and obvious in an organized approach to education in which "environment, information, and behavioral processes are (ostensibly) engineered to create optimal conditions for learning and development" (p. 2).

Vygotsky's position on the role of linguistic activity in the development of higher mental functioning and sociocultural theory informs the theoretical perspective of the study. Sociocultural theory (SCT) is partly a psycholinguistic theory which gives a key part to "concrete communicative activity" in mental development and functioning. SCT is "a theory of mediated mental development, it is most compatible with theories of language that focus on communication, cognition, and meaning rather than on formalist positions that privilege structure" (Lantolf & Thorne 2006: 4).

1.6. Research questions and hypothesis

The following research questions guide the present study:

1. To what degree will conceptual fluency and metaphorical competence be affected by authentic materials and CALL-mediated instruction?
2. How do authentic materials and CALL-mediated instruction impact learner outcomes with respect to conceptual fluency and metaphorical competence, i.e., is one of the four basic skills privileged over the others?
3. Can we predict whether the findings of this study are generalizable to other learners in different settings?

The null hypothesis of the study claims that EFL learners in classroom settings – whether based on coursebooks or authentic sources – will show the same development rate of conceptual skills and the same ultimate proficiency level.

1.7. Outline of the study

This chapter has presented an introduction to the current situation of L2 learners of English in coursebook-based classroom setting with a particular focus on Iranian classroom SLA, as well as those theoretical underpinnings which necessitate the present study. Chapter 2 reviews previous studies and relevant literature regarding conceptual and metaphorical competence, computer assisted language learning (CALL) techniques, the current situation of Iranian ESL classrooms and theoretical concerns. Chapter 3 outlines the methodology employed in the present study for the collection of data from participants in the control and experimental groups, through a pre-test, post-test and delayed post-test design along with questionnaires. Chapter 4 consists of a statistical analysis of the quantitative data obtained in the present experiment. Chapter 4 also presents results from qualitative data as a complement to the quantitative data. Lastly, Chapter 5 provides a detailed discussion of the results. It also highlights the shortcomings of this study, presents applicable pedagogical implications, and finally suggests areas for future related research.

2. Literature Review

2.1. Introduction

Language cannot be viewed without culture as it is strongly related to how people think and behave (Kramsch 1998). Language is not a set words and the structures put together in order to create propositions. Nor is language solely a system of sign and meaning, but it is a blend with the life of those who speak that language (Lantolf & Thorne 2006). Understanding language means interpreting the contexts in which it appears (Heritage 1984).

Lantolf and Thorne (2006) also point out that there are plenty of relationships between everyday life tasks and mental functioning. The involvement in such cultural activities during life influences cognitive development and functioning. We may be unable to find a one-to-one relationship between language and cultural identity, but language remains a key indicator of the relationship between a speaker and the community (Kramsch 1998).

Agar (1994) uses “languaculture” to highlight the relation between language and culture. This is the conceptual meaning made by speakers of a language as they perform different tasks and activities which are mediated by language. Meaning and form are codependent and the lack of one or the other gives a defective picture of language (Lantolf & Thorne 2006).

The problems that learners of a second language experience in expressing themselves are not solely rooted in lack of linguistic or even communicative knowledge. An area where language learners face problems even at so-called advanced stages is the area of metaphorical language (Charteris-Black 2003; Talebinezhad & Vahid 2002). This ability to express oneself like a native speaker in terms of concepts, which some second language learners seem to lack, is what Danesi calls conceptual fluency. To be

conceptually fluent in the SL, according to Danesi (2000: 158), “the student must be able to convert common experiences into conceptually and linguistically appropriate models”.

Among foreign language learners there is an assumption that almost no real fluency is possible in a foreign language learner unless the learner spends some time in the target language country. What the learners lack is effective conceptual fluency, i.e., knowing how the target language concepts are reflected on the basis of metaphorical structuring (Danesi 1992) and other cognitive procedures (Kövecses & Szabó 1996). Danesi introduced the notion of conceptual competence in 1992 in a rather vague manner and in 1995 more cogently referred to it as conceptual fluency. As Andreou and Galantomos (2009) noted, Danesi believes that a foreign language learner can be conceptually fluent if he or she is capable of organizing the expression of its various concepts in the target language based on metaphorical reasoning. In other words, metaphorical competence is closely linked to L2 proficiency.

We are not normally aware of our conceptual system. In most of the little things we do every day, we simply think and act almost automatically along certain paths. These lines are obvious. One way to find out is by looking at language. Since communication is based on the same conceptual system that we use in thinking and acting, language is an important source of evidence for what that system is like (Lakoff & Johnson 1980b).

2.2. Metaphor

Metaphors used to be viewed primarily in their poetic dimension. Until about 30 years ago, the realm of metaphor was literature and rhetoric. Even today, metaphor is primarily seen as related to literary or philosophical discourse (Cieślicka & Singleton 2004). Apart from its poetic dimensions, metaphor is the tool by which the human mind thinks of something in terms of something else. Metaphors provide a means for understanding something abstract in terms of something concrete. In this connection, the question that is raised focuses on whether there is a motivation for this similarity. Studies have shown that we cannot easily answer why we use metaphor nor what the bases for similarity consist of (Danesi 2003a, 2008). Metaphor is reported to be the

center of the mechanism in which humans show the ability of creating analogies. In his review article 'metaphor connectivity', Danesi (2003a) quotes the definition of metaphor from the literary critic I. A. Richards (1936) to the effect that metaphor is a complex form to represent the two referents' semantic and cognitive interaction of meanings. It is significant to know that the meanings are the connotative meanings of the referents. The historical system of connotative meaning is the background on which metaphor is based (Danesi 2003a).

Metaphor is viewed as understanding of one conceptual domain in terms of another conceptual domain (Kövecses 2002). The study of metaphor and its relation to language and cognitive skills was introduced in the 1980s through publication of Lakoff and Johnson's 'Metaphors We Live By' (1980b). The authors suggested that our perception and behavior is led and mediated through a non-linguistic conceptual system.

Discourse based studies of metaphor are growing, and they manifest new aspects of metaphor. Lakoff and others view metaphor as being at the heart of the world and suggest that it is as much a matter of thought as it is of language (Lakoff 1987, 1993, 2008; Lakoff & Johnson 1980b; Lakoff & Turner 1989; Singleton 1990). Metaphors present a program for human behavior and thinking. They convey the hidden aspects of communication. This power of metaphors must be related to their cultural nature. (Ghassemzadeh 2005). Metaphor is a component of culture since culture is based on metaphor and conceptual metaphors act in a systematic network of meaning. This network is a base for culture and displays the power of metaphor within a in culture. Culture is a systematic compilation of concepts that require language as tool to exchange thought (Danesi 1999). Basso (1976) puts it this way:

For it is in metaphor—perhaps more than in any other form of symbolic expression—that language and culture come together and display their fundamental inseparability. A theory of one that excludes the other will inevitably do damage to both. (Basso 1976: 93)

To comprehend and produce language, one must know the metaphorical and contextual aspects of the discourse in that language. In other words, the metaphorical construct and its context are related. Gee (1990) remarks that it is not possible to understand and speak a language unaware of the situations and the context in which it

is used. In this connection, language integration with the social practices that create that particular discourse is crucial. Metaphors are related to contexts, and studying them facilitates communication and learning. Moreover, metaphors may have useful functions in learning by helping learners raise their awareness of key concepts and issues (see Achard & Niemeier 2004; Cameron 2003; Cortazzi & Jin 1999; Littlemore 2005; de Guerrero & Villamil 2001). Examples in sections 1.2 and 2.5 illustrate how L2 learners' awareness of the concept in the target language can assist language learning and communication in English. "It is suggested that awareness-raising through discussion and comparison of metaphors in L1 and L2 is a useful approach to help learners to understand and appropriately produce metaphors" (Deignan, Gabryś, & Solska 1997: 352).

When learning and teaching metaphors are concerned, idioms and their relation with metaphorically used words and phrases become significant. Traditionally, idioms are considered a special set of the larger category of words. They are assumed to be lexical and independent of any conceptual system. Before discussing the idiom view based on metaphor, it is good to consider the following example from Kövecses (2002). In the expression "to spit fire", the target domain anger is understood by the source domain fire. This means that anger is understood through the conceptual metaphor of ANGER IS FIRE. As another example, in the idiom 'the fire between them finally went out', the underlying conceptual metaphor is LOVE IS FIRE. Kövecses gives enough one-word and multi-word examples to highlight the fact that not "all metaphorical linguistic expression expressions based on conceptual metaphors are idioms. The class of metaphorical expressions generated by conceptual metaphors is larger than that of metaphorical idioms" (Kövecses 2002: 235).

Learning idiomatic expressions helps learners for better communication as well as language learning in the target culture and society. However, Danesi (1999) emphasizes that the use of metaphor is not an idiomatic option. It is the basis of abstract conceptualization, forming a system of thought that penetrates the discourse. A good way to attain metaphorical concepts in the target language is to learn idiomatic expressions. Idioms are often metaphorical but not always. Not all metaphors are idiomatic (Kövecses 2002).

Kövecses (2002) concludes that "in many cases what determines the general meaning of an idiom is the target domain of the conceptual metaphor that is applicable to the idiom at hand, and that the more precise meaning of the idiom depends on the particular conceptual mapping that applies to the idiom" (238).

Deignan (2005) points out that "metaphorically used words have a noticeable tendency to occur in a fixed or semi-fixed expression, which often have idiomatic meaning" (cited by Semino 2008: 21). The metaphoricity of the multi-word expressions has sometimes been introduced through conventional conceptual metaphor (Semino 2008).

Metaphors are devices which have the potential of highlighting certain aspects of our experience. For Lakoff and Johnson (1980b), metaphor is in essence "understanding and experiencing one kind of thing in terms of another" (5). Regarding the relation between metaphorical expression and metaphorical concepts, Lakoff and Johnson (1980b) believe that they are tied together in a systematic way, and this enables us to use metaphorical linguistic expressions to study the nature of metaphorical concepts and to understand the metaphorical nature of our activities. Regarding the effect of metaphor in learning and life, there are important general facts that language teachers and linguists find it hard to ignore.

Danesi (2003b) states that metaphors are not arbitrary but rather are based on one's experiences. Abstract concepts are metaphorical transformations of concrete ideas. He states that such concepts become conventionalized through frequent usage and lose their relation to the concrete concept which previously existed for them. Gibbs (1999b: 145) states that metaphor "is a specific mental mapping that influences a good deal of how people think, reason, and imagine in everyday life." Therefore, metaphor is beyond a discourse ornament; it is an integral part of language.

2.2.1. *Everyday concepts versus scientific concepts*

One fundamental aspects of dialectic logic is based on what Bakhurst (2007) refers to as the principle of "ascent from the abstract to the concrete" (p. 70). This principle has a significant role in the relationship Vygotsky's theory has for the relation between everyday and scientific concepts (Vygotsky 1987). Everyday concepts are

shaped on the basis of concrete experience and based on what is generally received from the superficial aspects of each entity one encounters. Scientific observation and deeper consideration of characteristics shape scientific concepts (Lantolf & Poehner 2008).

Accordingly, abstraction based on scientific concepts "allows us to ascend to a detailed understanding of the concrete and particular" (Bakhurst 2007:70). To illustrate the difference between an everyday concept and a scientific one, people's everyday observation tells them that the sun moves in the sky. But scientific observation indicates a different planetary mode of movement (Lantolf & Poehner 2008).

Everyday concepts from practical experience are generally founded on "an immediate observable property of an object" (Kozulin 1995:123). Scientific concepts "represent the generalizations of the experience of humankind that is fixed in science, understood in the broadest sense of the term to include both natural and social science as well as the humanities " (Karpov 2003:66). These concepts are the consequence of theoretical learning, which is "aimed at selecting the essential characteristics of objects or events of a certain class and presenting these characteristics in the form of symbolic and graphic models" (Karpov 2003:71; Lantolf & Poehner 2008). Scientific concepts which are the result of systematic instruction assist us in gaining control over the object of study (Lantolf & Poehner 2008). As Vygotsky (1987) notes, mastery of such concepts is far from merely memorizing verbal definitions of the concepts as this just ends in verbalism rather than in a systematic ability to connect the concept to concrete activity. Accordingly, education is a systematic experience of movement from the abstract to the concrete. Instruction based on concepts and carried on by concepts should not be simplified. This idea runs counter to the notion that novice level students are unable to cope with complex grammatical or pragmatic functions. In this connection, "full mastery of a concept progresses through a series of concrete activities that results in its internalization" and "the concept must be connected to specific communicative (spoken and/or written) activity in order to be fully proceduralized (Lantolf & Poehner 2008: 13).

2.3. Figurative language and metaphor

Metaphors constitute the widest and most important category within figurative language. They can create social, cultural, and also psychological realities for people (Lakoff & Johnson 1980a). This is perhaps why Block (1999) considers metaphor production as “an ongoing process by which we constantly assimilate input by comparing and contrasting it with representations of previous experiences which we retain in our memories” (p.135).

Both linguistic and cultural knowledge are the elements embedded in conceptual competence. Traditional views did not regard the components of conceptual competence (e.g., metaphors and idioms) as central elements of the language while cognitive linguistics considers it an inevitable element in daily discourse. Figuration has a direct relation with the way we act, interact and find the world (Gibbs 1994). Danesi (1999) emphasizes that the use of metaphor is the basis of abstract conceptualization, forming a system of thought that penetrates all of discourse. Common abstract concepts are delivered in terms of concrete ones through the medium of metaphor, metonymy, and other generalized processes (Danesi 2008).

2.4. Conceptual metaphor

Metaphor is used to think, to explain oneself to others, and to organize talk. According to Lakoff and Johnson (1980b), there exist two kinds of concepts in a metaphor. Concrete and abstract concepts are the two categories while abstract concepts are created from concrete ones in a systematic way. Then, abstract concepts were renamed. They were referred to as conceptual metaphors "defining them as generalized metaphorical formulas that characterize specific abstractions" (Danesi 2003a: 410). To illustrate, consider Danesi's (2003a: 410) example:

People	are	animals
John		Gorilla
Mary		Pig
Alice	is a	Fox
Teacher		Snake

The metaphor formula is people are animals. In this conceptual metaphor, two parts of people (target domain) and animal (source domain) exist.

Increasing attention has been paid to conventional metaphorical expression language. Such expressions are often used and understood without our being aware of their metaphoricity (Semino 2008). Lakoff and Johnson (1980b) state that metaphorical expressions are widely used in language. They also claim that these expressions construct systematic sets such as the following:

- I *demolished* his argument.
- He attacked every weak point in my argument.
- He *shot down* all of my arguments.
- If you use that strategy, he'll *wipe you out*. (Lakoff & Johnson 1980b: 4)

The expressions give a description of verbal argument in terms of fight/war related concepts. As Semino (2008) states, the expressions do not talk about one thing in terms of another, but they suggest that humans think about something in terms of something else.

Semino (2008) defines conceptual metaphors as mappings, across conceptual domains, while a target domain (e.g., our knowledge about arguments) is partly structured in terms of a different source domain (e.g., our knowledge about war). She introduces conceptual domains as rich mental projections which are part of the background knowledge of a special event or an experience. Conventional sets of metaphorical expressions such as "I have never won an argument with him" and "Your claims are indefensible" (Lakoff & Johnson 1980b: 4) are observed as linguistic realizations of conventional conceptual metaphor: ARGUMENT IS WAR (cf. Lakoff & Johnson 1980a). This conceptual metaphor includes correspondences between those in arguments and enemies. According to cognitive metaphor theorists (Danesi 1992, 1993, 2003b; Lakoff & Johnson 1980b) target domains normally refer to areas of experience that are abstract and not clearly identified while source domains introduce concrete and more familiar ones.

In addition to conventional metaphors, metaphorical creativity and novel metaphors are significant. Semino (2008) states that "it is increasingly being recognized

that the creativity in language use is a widespread phenomenon.... Creativity in metaphor use needs to consider both the linguistic and the conceptual levels of metaphor" (p. 219). Following Lakoff and Turner (1989), Semino (2008) identifies the two paths of metaphorical creativity: Creative metaphorical expression related to conventional conceptual metaphor and creative metaphorical expressions with an unconventional or novel conceptual mapping. In this connection, the examples reported by Semino (2008) from McEwan (2001) give a better picture. The first is the example of novel ANIMAL metaphor and the second is creating metaphor based on the conventional pattern of describing pain in terms of weight (see Semino 2008: 38):

- "It was beginning to fade, the presence of her animal tormentor, and now she was able to arrange two pillows against the headboard in order to sit up" (McEwan 2001: 69).
- "As I moved over the heart centre, I experienced a heaviness in my chest" (Semino 2008: 40).

Apart from the conceptual skills L2 learners need to develop, it is crucial to know that lack of such skills leads the L2 learner to make inevitable errors. Such errors, referred to as conceptual errors, result from the L2 learner's hypothesis that meanings in the target languages are reflected with identical or parallel concepts, structures and words in the speaker's L1. For example, as Russo (1997) found, English-speaking learners of Italian assume that expressions such as 'fall in love' would be erroneously 'cadere in amore'. My English-speaking students who learned Persian at Simon Fraser University had a conceptually erroneous understanding of the same expression. In Persian 'aashegh shodan', which literally means 'become a lover', has a positive connotation while 'dar (dame) eshgh oftadan', which is much closer literally to 'fall in love', has more negative connotation. This negative connotation suggests that the lover is not on the right track but trapped in a difficult situation and should be saved.

Error-based research on classroom second-language discourse and writing suggests that the errors that are most disruptive of comprehension are conceptual (meaning-based), rather than strictly "form-based" (phonological, syntactic, etc.) or communicative (interactive and strategic). (Danesi 2008: 1)

Valeva (1996), however, raises a question and states that conceptual error is merely a fancy term and it is really a type of lexical error. Other researchers, (e.g.,

Kövecses 2002) however, claim that the use of idioms and metaphors in discourse is not a simple lexical choice (Danesi 2008).

To illustrate the conceptual errors made by language learners, I can give the example of one of my students in Iran. She was a Korean learner of Persian who had gone shopping. The culture of 'taarof' is common in Iran. It is in most cases showing respect to the interlocutor. The Korean student had gone shopping for a pair of shoes. Knowing about the background concerns of 'taarof' in Iranian culture, it is very common in Iran that a sales person suggests the buyer not pay for the item bought. But he/she does not really mean it. The shopkeeper normally says that the customer does not need to pay and he uses the metaphor 'befarmayeed' or 'ghabel nadare', but it is just a sort of greeting to show respect. My student had left the shop happily due to the wrong impression that the shopkeeper really meant that she did not have to pay. Danesi (2003a) describes the link between conceptual metaphor and culture:

Culture groupthink is built on conceptual metaphors, because these coalesce into a system of abstract thinking that holds together the entire network of associated meanings in a culture. This is accomplished by a kind of 'higher-order' metaphorizing—i.e., as target domains are associated with many kinds of source domains, the concepts they underlie become increasingly complex, leading to what Lakoff and Johnson call cultural or cognitive models (Danesi 2003a: 411-412).

Though a great deal of attention has been given to pragmatics in language learning, EFL students in Asia still face shortcomings in this area (Austin 1998; Spencer-Oatey & Xing 2000). There are different reasons for this, but Hwang (2008) introduces two: 1) the vast difference of culture and frame of conceptualization between Western culture(s) and Asian ones; and 2) too much trust in generic EFL coursebooks, which are produced for the international market.

When EFL students in classrooms have to deal with authentic L2 materials that address "culture-specific references", they fall back on their own L1 conceptual system for the interpretation of the message and thus arrive at a different understanding than what the message intended (Hwang 2008: 3). Danesi (1993) agrees and states that even if language learners can develop a high level of communicative proficiency, by using the mother tongue conceptual system as the base beside the target language

words structures, their discourse will not be appropriate but rather marked. Albreshtsen, Haastrup and Henriksen (2004) add that a grasp of conceptual metaphor undoubtedly leads to real improvements in learners' "apprehension and assimilation of L2 linguistic metaphor" (p. 81).

2.5. Metaphor and culture

Considering the relationship between concrete and abstract concepts and how they create conceptual metaphors, it is easy to see the construction of metaphorical thinking in a cultural setting. Conceptual metaphors are put together in a culture like big networks of interrelated meanings. The association of target domains with as many source domains leads us to a complicated network which was referred to as a cultural model by Lakoff and Johnson (1980b). The cultural models lead to systems and behaviors. In addition, novel metaphors, which are created as result of new analogies, give novelty to this cultural system (Danesi 2003a).

"Culture is built on metaphor, since conceptual metaphors are involved in a system of meaning that holds together the entire network of associated meanings in the culture "(Danesi 1999: 18). Bruner (1985) states that the world is symbolic and includes systems which are conceptually formed. Culture is the source of a rich file of concepts which need language as an instrument of thought for their use (Danesi 1999). Every language has specific concepts that are culturally formed. Native speakers of the language have the internalized skill of understanding and conceptualizing the world similarly (Danesi 1999).

Within the Vygotskian tradition, culture is understood as an objective force that infuses social relationships and the historically developed uses of artifacts in concrete activity. An understanding of culture as objective implies that human activity structures, and is structured by, enduring conceptual properties of the social and material world. (Lantolf & Thorne 2006:1)

Language learners' failure in communication which originates from misconceptions has been identified as the result of cross-cultural differences. The conceptual system of a native speaker's language and an L2 learner's conceptual

system may simply be different (Cohen 1996; Pohl 2004; Tyler 1995). Conceptual differences and sociocultural mismatches of learners' discourse are observed in daily spoken and written interactions. Examples may refer to situations of greeting, requesting, ordering, phone conversations, and compliments:

- Greeting: In English, a salesperson greets the customer with “Can I help you?” while the Persian salesperson usually uses the expressions 'Befarmayeed!' (Yes, please! — Farsi speakers use this expression in many situations such as offering something to someone, replying on the phone, offering a seat) or 'chizi mikhastin?' (Do you need anything?) though in few cases 'Mitunam komaketun konam' (can I help you?) as a borrowed expression is used.
- Greetings on the phone: "Americans verify the number they reach; French people make an apologetic statement first; Germans identify themselves without being asked to do so; Egyptians seem to be unwilling to be the first to be identified... Westerners living in Egypt found this behaviour strange, and even offensive" (Wolfson 1989: 96). Persian callers usually start to speak on the phone with 'Alo' (Hullo) and the receiver most probably replies with 'Alo, befarmayeed' (Hullo, please start talking) or 'bale' (Yes). The business company receptionist will reply to a phone call with introducing the company which is more similar to the western culture. A Canadian receiver replies to A: “May I speak to...?” B: “This is he/she” or “Speaking.” Persian receivers would say 'Befarmayeed' or 'Befarmayeed, khodam hastam' (I am myself, please tell me/keep on).
- Congratulations: Farsi speakers congratulate others using a phrase with the main term 'Mobarak'. To give an equivalent message with the same semantic content in English, in some cases 'congratulations ...' and in other cases 'Happy...!' are used. Sometimes, as example 3 below shows, the concept does not exist due to cultural concerns. See the following for the concept 'Tabrik goftan' (congratulations) in Farsi and its counterpart in English:
 1. 'Sale no mobarak!' (Happy New Year!)
 2. 'Mashine no mobarak' (Congratulations! You have a new car.)
 3. Mohatun mobarak! (Nice haircut!)

During the years I taught English in Iranian ESL classrooms and Persian in North American classrooms, I observed many conceptual mismatches in learners' discourse compared with what native speakers would say in similar situations. The grammatically correct discourses produced by the learners are often culturally and conceptually not accepted by native speakers of the target language and in some cases they appear offensive and insulting. Exposure of learners' to English pragmatics raises their awareness of language in real interaction (Kasper & Schmidt 1996). As Hwang (2008)

puts it, the metaphors in a language are not necessarily recognized in a different language, for example, for the term 'Freeze', there is a literal meaning in Farsi 'monjamed shodan' while the metaphorical concept (Freeze! Meaning to cease all motion) is not expressed with the same compound term. In Farsi, a totally different phrase is used 'Dasta bala!' (Raise your hands) to mean 'Freeze!' (to cease all motion). Another example is the concept delivered by the word 'Zahmatkesh' (literally 'someone who works hard') in Farsi, and the term does not have an English equivalent as far as I know. To describe the concept as briefly as possible, "Zahmatkesh' refers to someone who honestly works and makes his best effort to accomplish his/her job. He is referred to as reliable and far from cheating at what he does. It is his/her goal to make money for the family.

Lakoff and Johnson (1980b) discuss metaphor and cultural coherence and believe that the most fundamental values in a culture will be coherent with the metaphorical structure of the most fundamental concepts in the culture. These are values deeply embedded in the culture. The concept ARGUMENT, introduced by Lakoff and Johnson in the metaphorical concept of ARGUMENT IS WAR, is a well-known example (Lakoff & Johnson 1980b: 203):

- Your claims are indefensible;
- He attacked every weak point in my argument.

Two groups of metaphors are recognized in cognitive linguistics, primary and conceptual metaphors. According to Lakoff and Johnson (1980b; 1999), bodily metaphors are universal, that is, people seem to experience the physical world similarly through their bodies based upon which primary metaphors are shaped. Secondary metaphors, which are shaped by the combination of primary metaphors, are under the influence of cultural features. In the emergence of meaning, that is, in the process of something becoming meaningful, the human body plays an especial role (Johnson, 1987; Lakoff, 1987; Lakoff & Johnson, 1999; Gibbs, 2006). Consider, for example, the following common metaphorical portrayals of health in contemporary western culture (Lakoff & Johnson 1980: 15 and 50):

1. You are at the peak of your health.

2. My health is down.
3. You're in top shape.
4. My body is in perfect working order.
5. My body is breaking down.
6. My health is going down the drain.
7. His pain went away.

The end result is a way of thinking and talking about health in English that takes place unconsciously in the domain of metaphor — “healthiness is up, unhealthiness is down”; “healthiness is a well-functioning machine, unhealthiness is malfunctioning machine”.

Metaphorical conceptualization in natural situations occurs under two simultaneous pressures: the pressure of embodiment and the pressure of context. Embodiment has been already discussed, and context may be characterized by physical, social, cultural, discourse, etc. aspects, and it consists of such factors as the setting, topic, audience, and medium, which can all influence metaphorical conceptualization (Kövecses 2002). For example, Boers (1999) showed that physical context may systematically shape the way we think metaphorically. Boers studied the ECONOMY IS HEALTH metaphor over a ten year period, and found that the use of this metaphor is systematically more frequent in the winter than in the summer. ECONOMY IS HEALTH is a potentially universal metaphor the use of which varies according to the physical context of metaphorical conceptualization.

Context is determined by local culture. As primary metaphors originate from body shapes, some researchers, including Gibbs (1999a), claim that primary metaphors are also affected by culture due to the effect of culture on body shaping. For example, as shown in physiological studies, anger is accompanied by several physiological reactions, such as increases in skin temperature, respiration rate, blood pressure, and heart rate (Ekman et al., 1983). In English and Hungarian, a rise in body temperature and an increase in blood pressure receive equal attention (Kövecses 2002). In Chinese, the presence of pressure is significant (Kövecses 2002). In Persian, body temperature and increase in blood pressure are involved.

Perhaps the most important thing about the conceptual system is the distinction between an experience and the way it is conceptualized. It is not claimed that physical

experience is in any way more basic than other kinds of experience such as emotional, mental or cultural. All of these experiences may be just as basic as physical experiences. Rather, what is claimed is that we typically conceptualize the nonphysical in terms of the physical — that is, we conceptualize the less clearly defined in terms of the more clearly defined (Lakoff & Johnson 1980b).

2.6. Exposure to authentic materials through CALL techniques

Technological developments continue to impact language learning and teaching in various ways. It is crucial for teachers to effectively use and include technology with instructional activities (Lurk & Britten 2007). Language learners' authentic interaction and their direct contact with the target language is a necessity (Erben et al. 2009; Lantolf & Thorne 2006). In this connection, Markee (2004) adds that creating the social environment in language classrooms for the interaction of the language learner and authentic sources promotes language learning.

Computer assisted language learning techniques can bring authenticity to classroom SLA. This is highly appreciated in countries in which contact by language learners with native speakers of the target language and with authentic sources through other means is limited.

Enabling students to acquire an intuitive sense with which they contact real-world language should be a critical part of EFL instruction. Learners find it highly unlikely that one can learn pragmatics from textbooks (Vellenga 2004). Instead, the EFL classroom can be made a realistic English-learning setting through the use of authentic materials. Authentic material may be defined as “materials that have been produced to fulfill some social purpose in the language community” (Peacock 1997: 146). Erben et al. (2009) remark that computer-mediated communication should be used in different settings because it provides learners with more authentic input and encourages them to have more natural output (see also Blake 2000; Pellettieri 2000).

Levy (2009) states that there is less disagreement on the application of technology in order to boost educational goals. Numerous studies have supported the

involvement of technology in education and particularly in the area of this study, that is, foreign language learning in the classroom (Chapelle & Heift 2009; Levy 2009; Schulze 2008). But we should also investigate and consider the limitations of technology (Lurk & Britten 2007). In many cases, factors such as the cost of technology and its effectiveness, the availability of certain technologies, e.g., internet access for Voice Over Internet Protocol systems (VOIP), and classroom space requirements need to be considered.

Mambo (2004) examined the learning of cultural and linguistic patterns in technology-supported learning environments. The study investigated the creation of a meaningful way to assist learners with language skills and the improvement of cultural knowledge. His applied qualitative data analysis and the study showed that teachers understood the significance of technology's potential. Also, the integration of technology helped the students to acquire real-world skills.

Widdowson's (1990) discussion on authenticity is also a relevant concern to this study. He differentiates between authentic and genuine materials. He refers to authentic materials as the ones originally created for native speakers of the language while they are used in classrooms for the purpose of teaching. Whereas genuine materials are authentic materials which are made fit for classrooms, For instance, selected parts of a newspaper or cut out headlines which are prepared for teaching are counted as genuine materials.

2.7. English language learning in Iran

English is taught from middle school through high school in Iranian public schools. Apart from public schools, there is a growing privately managed system of English institutes in the country as well. English receives significant attention and many students spend extra hours studying this subject due to their interest. English is considered so crucial a factor that the quality of a school's English program and the skill of the teacher or teachers working in each school may determine a family's choice of school for their children.

As Dahmardeh (2009) states, English has worked its way right to the heart of Iranian society, being considered a need rather than a mere school subject. English is the dominant language of foreign trade, international conferences, air traffic control, sea navigation, international marketing and business, the Internet, Iran's cooperation with the UN, Islamic Conference Organization, Economic Cooperation Organization (ECO) and the Organization of the Petroleum Exporting Countries (OPEC), among other enterprises. This makes learning English a very valuable investment.

Teaching English by textbook is considered one of the most important topics in countries like Iran where English is a foreign language. Dahmardeh (2009) describes the English language learning system based on textbooks in Iran and gives a clear picture of the textbook designed for the secondary school curriculum.

With respect to the textbooks, it needs to be explained that in Iran all the textbooks for the schools are produced by the Ministry of Education. A secondary school in Iran includes 4 years of studying and in each level there is one book for Teaching English as a Foreign Language (TEFL). Every academic year is composed of two terms (each term includes nearly 12 weeks). Moreover, book 1 includes nine lessons, book 2 has seven lessons and book 3 consists of six lessons and they all follow the same structure. Moreover, each lesson is composed of 8 main parts (New Words, Reading, Write It Down, Speak Out, Language Functions, Pronunciation Practice, Vocabulary Review, Vocabulary List). Teaching four language skills has also been emphasized as one of the main aims of the national curriculum. However, careful analysis of the curriculum document suggests that its main concern is about reading comprehension and grammar. It is the case because each skill is defined in the framework of reading. Furthermore, the bulk of the document is devoted to a presentation of reading strategies and how to teach this skill as well as teaching grammar. (Dahmardeh 2009: 3)

In his study, he explored teachers' perspectives and their perceptions of students' needs. The results indicated

Iranian students have to study English for nearly seven years (3 years in Guidance school, 3 years in Secondary school and 1 year in Pre-University level), yet the education they receive neither enables the students to attain full competence in using the English language nor helps them to interact with confidence. Having considered the students' lack of success in communicating in English with colleagues in different parts of Iran, it is concluded that some of the problems teachers and learners encounter can be traced to the textbooks. (Dahmardeh 2009: 8)

Talebinezhad (2007) studied second language learning in Iranian classrooms. His study focused on the ultimate attainment of adult Persian-speakers learning English as a second language in terms of their conceptual fluency which was supposed to account for their metaphorical competence. The data showed that natives and non-natives differed drastically in both type and amount of figurative language they employed in conveying similar concepts. The results confirmed the hypothesis that L2 learners need to be exposed to metaphorical language in the L2 in order to become conceptually fluent.

As mentioned above, private English language institutes are at work for the teaching and learning of English in Iran. Students attend extra classes besides their English classes at their public school. To see how the private sector is actively involved in teaching English in Iran, let us take a look at the number of institutes granted licences by the Ministry of Education — the oldest licensing organization — and the Ministry of Culture and Islamic Guidance, reported by Sadeghi and Talebinezhad (2005).

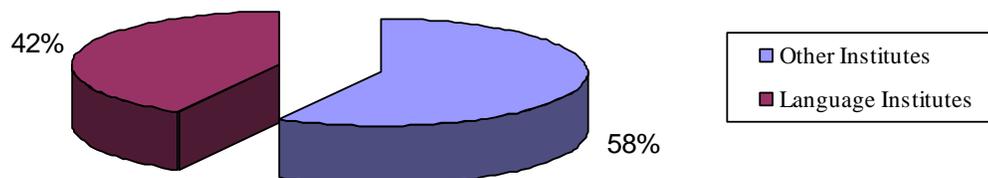


Figure 2.1. Comparison of the number of other institutes with that of English institutes (licensed by Ministry of Education, Iran)

As Figure 2.1 illustrates, from the 4,678 educational institutes in Iran licensed by the Ministry of Education, 1,971 institutes are language institutes and English is the first language taught in these institutes. This accounts for 42% of the total number of the institutes. The remaining 58% belongs to centers teaching all branches of science, art and technology. Figure 2.2 illustrates that for the private institutes whose license was granted by the Ministry of Culture and Islamic Guidance, of 186 institutes, 127 are English teaching institutes (Talebinezhad & Sadeghi, 2005)!

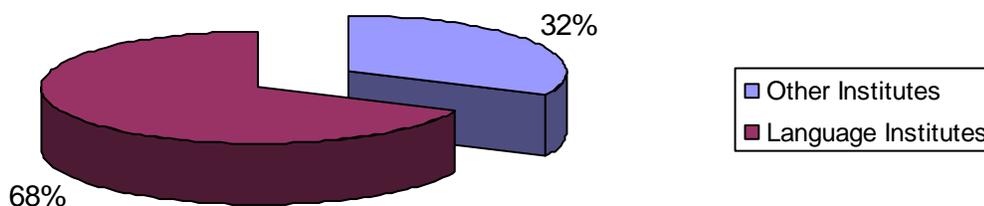


Figure 2.2. Comparison of the number of other institutes with that of English institutes (licensed by Ministry of Culture and Islamic Guidance)

In such a setting, learners in second language classrooms mostly use inauthentic materials – internationally-developed materials such as coursebooks, instructional films, and artificial listening exercises (Talebinezhad & Mahmoudzadeh 2011). Classes are taught mostly by teachers who have learned English in the same setting and they have mastered a good level of verbal fluency, rather than conceptual fluency.

In both private institutes and public schools (for both middle schools and secondary schools) textbooks are used for teaching English. The difference is that in middle schools and secondary schools the textbooks are locally-developed ELT (English language teaching) textbooks (namely, the textbooks used in Iranian high schools) while in private language institutes internationally-developed textbooks are used such as Interchange (Richards, Hull, & Proctor 2006), New Headway (Soars, L. & Soars, J. 2006), New Person to Person (Richards, Bycina, & Aldcorn 1995), Spectrum (Donald, Byrd, & Costinett 1992), Advanced Language Practice (Vince 2003), First Certificate Language Practice (Vince 2003), True to Life (Gairns & Redman 1998), Tactics for Listening (Richards & Trew 2003), New English File (Oxeden & Latham-Koenig 2008), and Open Forum (Blackwell & Naber 2007). Studies have been conducted on the two kinds of English textbooks in Iranian EFL classrooms: Locally developed textbooks and internationally developed textbooks (Dahmardeh 2009; Talebinezhad & Mahmoudzadeh 2011). Studies have shown classes based on both locally and internationally developed textbook were not successful in assisting L2 learners with conceptual development (Hashemian & Talebinezhad 2007; Talebinezhad & Sadeghi 2005).

My experience in teaching second language in Iranian classrooms through coursebooks accords with Alan Pulverness's (2004) quote on the deficiency of EFL coursebooks:

Much published language teaching material seems designed to promote 'cosmopolitan English', partly as a consequence of idealised notions of English as a lingua franca, and partly to ensure maximum worldwide sales by avoiding any taint of cultural specificity. I feel very strongly that this attempt to separate language from its cultural roots is likely at best to prove inadequate, because it aims at developing the foreign language as a neutral code, free of its history, free of its social moorings – in short free of culture. It is lack of awareness of such contextual and pragmatic constraints that is often responsible for pragmatic failure. (cited in Hwang 2008: 7)

In classrooms based on coursebooks, a mismatch can be seen between how the native speakers of the target language develop language concepts for new experiences and how L2 learners are taught to depend on prescribed and so-called simplified rules. In this connection, Mey (1993) disagrees, believing that linguistic concepts and pragmatics can be explained and learned by laws. The shortcomings of coursebooks originate from the fact that complicated concepts are shrunk into simple straightforward rules. While authentic materials act on the contrary side. The use of authentic materials in EFL classrooms affords the opportunity of having genuine interactions. "Awareness of L2 pragmatics needs to be seriously addressed in the classroom. Just as students need to be taught how English functions in authentic contexts, EFL educators need to be more alert as to the artificiality of textbook language and more focused on the complexities and subtleties in real-world English" (Hwang 2008: 10)

2.8. Significance of context

Conceptual metaphors seem to facilitate discourse comprehension (Cieslicka & Singleton 2004). Studies by Allbritton, McKoon and Gerrig (1995) show that metaphorical roots are deeply contextual based.

Communication finds real shape and meaning in the context within which it is situated. The words have meanings by which we convey our thought and intentions, but

this is not enough for the communication of ideas through words. Apart from the concept, which is closely related to the discourse text, the context itself has a crucial role in the interpretation of the messages exchanged. For example, the expression 'Khaste nabashid' (literally means 'Do not be tired') in Persian may have different meanings depending on the context:

- If a student uses it at the end of class, it means politely that time is over and students are tired.
- If somebody uses it in the context of a greeting, it is sort of saying 'hello'.
- If a mother says the expression to her daughter who has not done the housework she was supposed to do, it means that the mother is talking sarcastically and she is sort of angry at her daughter.

Successful and helpful communication is based on the appropriate interpretation of messages exchanged. Not knowing about the contextual concepts is a significant cause of language learners' failure in the intended interpretation of the messages. Context is built up based on the cultural construct of its parts. Such failure can occur in any sort of communications such as in daily conversations or in translations.

2.9. Theoretical perspective of the research

Sociocultural theory (SCT) identifies the relation between social and cultural constructs and the organization of human mental development. The origin of sociocultural theory is the writings of the Russian psychologist L. S. Vygotsky and his colleagues. SCT "is not a theory of the social or of the cultural aspects of human existence. ... it is, rather, ... a theory of mind ... that recognizes the central role that social relationships and culturally constructed artifacts play in organizing uniquely human forms of thinking" (Lantolf & Thorne 2006: 1). Mediation is the main concept in sociocultural theory. The theory discusses human mental functioning as a mediated process organized by cultural artifacts, activities, and concepts (Ratner 2002). Using the current cultural artifacts and the new ones created, human beings regulate their biological and behavioral activity. In other words, processes of mental activity develop by participation in cultural, linguistic, and historically formed settings including any social activity. In addition to biological conditions, cognitive activities owe their development to social

interactions (Lantolf & Thorne 2006). SCT is not a "formal theory of language" but a theory of mediated mental development and most compatible with language theories which "focus on communication, cognition, and meaning" (Lantolf & Thorne 2006:3).

In addition to physical objects, Vygotsky argues that humans can also use symbols as tools to mediate their psychological activity. Language is the strongest cultural artifact that humans possess to mediate their connection to their surroundings. As a result, he insists that biological capacity is not sufficient for intentional and voluntary control of humans over their mental regulation of activities. The internalization of culturally constructed mediating artifacts is a need beside biological capacities and language is one of the most important tools of this kind (Lantolf & Thorne 2006). The process through which cultural artifacts, such as language, take on a psychological function is known as internalization. Internalization and mediation are the central concepts of SCT. As Kozulin (1990: 116) puts it, "the essential element in the formation of higher mental functions is the process of internalization."

Harre and Gillet (1994) remark that human beings live in two worlds. One is based on signs and symbols and managed primarily through language, and the other consisting of material objects that is under the control of our hands and brains. The nature of the relation between these two has been a matter of discussion.

Human's higher mental activity is mediated by auxiliary means which have a culture based structure (Lantolf & Thorne 2006). Human development is not the result of just man's individual functions but of all social relations. In other words, higher forms of thinking definitely use external symbolic forms. Through cultural activities (e.g., playing games, educating and training children) in which tools (e.g., balls, books) and concepts (literacy, laws) interact in complex ways with each other and with biological/psychological phenomena higher mental functions such as rational thinking and learning emerge (Ratner 2002). That is why human consciousness, that is, awareness of mental ability, is believed to be mediated through "culturally and organized means". It is believed that "from a neuropsychological perspective mediation is the setting up of connections in the brain from outside" (Lantolf & Thorne, 2006: 59).

The concept of mediation has been widely discussed in the sociocultural theory literature (see Lantolf 2000). Wertsch (2007) states that "a hallmark of human consciousness is that it is associated with the use of tools, especially psychological tools or signs" (p. 178). This means that human contact with the physical and social world is indirectly mediated by signs. Cultural tools have social and psychological functions, and interaction between people is possible when there are identical cultural tools for both sides. Sign-based mediation is active in "quantitative improvements in terms of speed or efficiency and qualitative transformation in the thinking process" (Wertsch 2007:17). If the goal of psychological research is to learn about mental functioning in human beings, it is essential to understand the way we use signs for organizing and capturing one's own or others' social and mental activities (Lantolf & Poehner 2008).

According to Vygotsky (1976), children have interactions with adults and find their path into the sociocultural environment and its symbols, their language, and the meaning attached to them. Mental activities in his framework are the result of social learning and internalization of culture (Blanck 1990). Two classes of tools have been distinguished by Vygotsky: physical and psychological. Language is an example of a psychological tool; it possesses different forms depending on the historical/contextual aspects of a culture and its individuals.

2.9.1. *The zone of proximal development*

The story of the zone of proximal development (ZPD) concept begins with Vygotsky's law of cultural development. Vygotsky's well-known formulation is that:

- Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane, and then on the psychological plane. First, it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This is equally true with regard to voluntary attention, logical memory, the formation of concepts, and the development of volition. . . . [I]t goes without saying that internalization transforms the process itself and changes its structure and functions. Social relations or relations among people genetically underlie all higher functions and their relationships. (Vygotsky 1978: 57)

The ZPD is not just a model of the developmental process. It is also a conceptual tool that can be used to realize students' capacities during maturation stages (Lantolf &

Thorne 2006). According to Erben et al. (2009: 53), Vygotsky's zone of proximal development establishes a "conceptual link between the psychology of child development and the pedagogy of instruction". This means that psychological development including language learning is socially linked with instruction (Erben et al. 2009). Vygotsky's definition of the ZPD is:

The distance between actual developmental level as determined by individual problem solving and the level of potential development as determined through problem under adult guidance or in collaboration with more capable peers. (Vygotsky 1978: 86)

Vygotsky saw the ZPD as a way to capture humans' dynamic interactions with the environment and the resultant effect on development. As human consciousness is a result of cultural interaction with its surroundings and with others, Vygotsky (1978) concluded that human mental abilities emerge on the intermental and intramental planes. He added that abilities can be revealed by "exploring individuals responsiveness to various forms of mediating support. He advocated a double method of evaluation that includes both independent performance to reveal an individual's zone of actual development and performance in cooperation with a mediator to uncover ZPD" (Lantolf & Poehner 2008: 15).

Through the application of ZPD principles, it is possible to uncover the source of learners' difficulties and to find a way to remedy them. This has given rise to a series of assessment activities under the rubric of Dynamic Assessment (DA). Different approaches to DA have one thing in common, and that is to "uncover abilities that remain hidden during assessment" (Lantolf & Poehner 2008: 16).

2.9.2. Sociocultural theory and second language acquisition

Studies by Roy (1988) of mediation effects on second language (L2) writing; by Warschauer (1998) and Erben et al. (2009) on computer-mediated L2 interaction; by Anton and Di Camilla (1998) on the mediational use of the first language (L1); by Antonek, McCormik and Donato (1997) on the mediating role of portfolios; and by Appel and Lantolf (1994) on the mediating function of L2 speaking are all reported by Erben et al. (2009). He also states that these studies provide evidence to show that mediation

acts as a "cognitive amplifier" that both assists L2 interaction and language learners' "reconstruction of their sociocultural, linguistic, and professional discursive practices" (p. 54). It also facilitates L2 "socialization into target knowledge communities" (p. 54).

Foley (1991) remarks that although the teacher and classroom environment may be taken as mediators in language learning, second language learning is self-regulating and cannot be controlled through such mediators. This means that learning must be principally pursued through social interaction between L2 learners and native speakers.

Lantolf & Poehner (2008) propose that a revolutionary pedagogy is possible in the L2 classroom. They note that teachers do not need to wait for students to be ready as "conceptually-mediated learning activity not only prepares the way for development to occur but at the same time promotes development itself" (p. 223). The conceptually-mediated approach is not based on the "teaching of morphology, syntax or just communication, but on meaningfully integrating the teaching of concepts as categories of meaning in the communicative language classroom" (p.223).

Lantolf & Poehner (2008) believe that the semantics-pragmatics of L2 development are "revolutionary" from two viewpoints. First, it is possible that concepts can be internalized from the beginning levels if teaching is properly organized. Second, it is possible that this internalization procedure can itself change the "route and the rates of learning" (p. 224).

Communicative language teaching and sociocultural theory

There are approaches such as communicative language teaching that claim the application of authentic materials in their teaching construct is central. This may create a question about the current study and the role of authenticity in conceptual skill development. Communicative language teaching also uses authentic context for language teaching purposes. Such authentic sources are adapted from documents which have been designed for native speakers of the language. There are differences between authenticity of context in sociocultural theory (SCT) and communicative language teaching (CLT). Lantolf & Poehner (2008) discuss these differing perceptions of authenticity and how SCT deals with them:

SCT suggests that cultural artifacts are socially bound. If CLT releases them from their social constraints by introducing them into the classroom, often to serve linguistic purposes, is the contextual frame they promise lost? CLT typically asks students to imagine real-world interactions and transform them into tasks for in-class role plays. Activity theory suggests that tasks too are culturally bound, that individuals respond to situational demands in performing them and that how tasks are mediated relates directly to the histories and agencies of individuals involved in them. (p.373)

In this connection, Lantolf & Poehner (2008) claim that tasks in a CLT-based classroom can be authentic only in that situation. This is due to the fact that the task is based on the "learner community" and not on the "target-language". The task can only lead to linguistic skill development and not the acquisition of cultural bound notions associated with communication, such as conceptual metaphors (373).

The lack of a community outside the borders of the classroom, with only its students and teacher, defies acquisition of communicative competence in Hymes's sense. SCT would suggest that an authentic community of practice in which all members – language learners and native speakers – share a stake, negotiate meaning together and work toward common, dynamic goals is missing in our pedagogies and in our classrooms. The borders of our classrooms and the dynamic processes occurring in them need to be re-examined in order for us to redirect foreign language learning toward the promise of communicative competence. (p. 373)

2.10. Conclusion

The study of metaphor requires putting many disciplines and scholars together to learn about human cognitive abilities. In chapter two various areas such as cognitive linguistics, psycholinguistics, language acquisition, computer-assisted language learning, Psychology, Education psychology, and sociolinguistics are very briefly introduced to provide a research background of this study. "Metaphorized concepts are detectable not only in language, but also in gesture, art, science, and the other representational codes that make up the 'signifying order' of a culture" (Danesi 2003b: 419).

Meaning based on social and cultural situations is easily predictable for the native speakers while it is not the case for foreign language learners (Bouton 1992). This

may lead to the hard time language learners have in managing cultural based interactions. "Misconceptions and communication breakdowns are often brought about by cross-cultural discourse differences because the pragmatic conventions of native speakers and L2 learners may differ substantially... Understanding pragmatic conventions is the gateway to intercultural communicative competence" (Hwang 2008: 18). Authenticity, real world English usage and real life experience are among the features EFL students need. This form of mediation between language and thought is the basis of conceptual development for language learning in sociocultural theory.

3. Methodology

3.1. Introduction

This chapter introduces and discusses the methodological approach and research design best suited to examine the research questions set out in Chapter 1. As Cohen, Manion and Morrison (2000) discuss, method means "the range of approaches used in educational research to gather data which are to be used as a basis for inference and interpretation, for explanation and prediction" (p. 47). They argue that one should try to find a balance between quantitative and qualitative data. The combination benefits the most worthy features of each (Cohen et al. 2000). The quantitative data in my research includes: pre-test, post-test and delayed post-test data. Though the main design is an experimental approach, questionnaires were used in order to add a qualitative component to gain insight into the reasons for students' difficulties and strengths.

An overview of the research design follows, beginning with an outline of the key sections of the methods employed: namely, pre-test, pre-questionnaire, control and experimental group treatments, post-test, post-questionnaire, and delayed post-test. The subsequent section includes an illustration of the data collection process followed by an overview of methods used in data analyses. Ethical issues concerning the research process are also clarified. The chapter concludes with a brief summary.

For many true experimental designs, pre-test/post-test designs are the preferred method to compare participant groups and measure the degree of change occurring as a result of treatments or interventions (Cohen et al. 2000). Data before the intervention and after the intervention give facts about the development over time and describe the facts for the treatment group. But changes observed by comparing before-after (or pre-post) data are rarely caused by the intervention alone since other interventions and processes may influence developments. Thus, the single most important precaution is

that the subjects must be randomly assigned to groups in a true experimental design to invalidate confounding variables.

Patton (1990) states that different methods are appropriate for different situations so that designing a study appropriate for a specific situation is largely determined by the purpose of the study, the question being investigated, and the sources available. Because of the present research questions, the complexity of classroom reality, and the limitations associated with every research method, an quasi-experimental research approach was adopted. This was accompanied by pre/post-questionnaires to provide supplementary qualitative data and so strengthen the study design.

As Anderson and Poole (2001) point out, the combination of qualitative and quantitative research is sometimes reasonable to maximize the theoretical implications of the study. An adoption of a qualitative approach beside a quantitative approach allows the researcher to not only describe events and behaviors, but also to explore why such phenomena occur (Marshall & Rossman 1995). Combining a qualitative approach with a quantitative approach in the present study offers enhanced description and explanation possibilities.

Table 3.1 displays the data collection methods: pre-questionnaire, pre/post-test, delayed post-test, and post-questionnaire.

Table 3.1. Data Collection Methods

Method	Pre-questionnaire	Pre-test	Post-test	Delayed post-test	Post-questionnaire
Time	Before the classroom treatment	Before the classroom treatment	After the classroom treatment	4 months after the post-test	After the classroom treatment

3.2. Research Plan

The participant pool was randomly selected from among the Persian learners of English in Isfahan, Iran. Participants were not given the detailed goals of the study, but were briefly informed that the research would test and evaluate hypotheses that could

have a positive role in the improvement of foreign language teaching/learning. All participants signed consent forms. Participants completed the pre-questionnaires (see Appendices A and B). These provided the researcher with participants' English learning history and other background details. The cultural questionnaire evaluated the participants' knowledge about 'Life on Campus' — the content area under investigation.

The pre-tests (TOEFL iBT and tests of oral/written discourse metaphor density) evaluated, respectively, the participants' English language proficiency in terms of the four basic language skills (listening, speaking, reading, and writing) and participants' conceptual skills and metaphorical competence in English. The tests measurement of conceptual fluency in both written and oral discourse was based on the metaphorical density (metaphor identification) of the discourse texts produced based on scientific methods of metaphor identification which will be presented in sections 3.7 and 3.8 (Cameron & Maslen 2010; Danesi 1995; Pragglejaz group including; Peter Crisp, Ray Gibbs, Alan Cienki, Gerard Steen, Graham Low, Lynne Cameron, Elena Semino, Joseph Grady, Alice Deignan & Zoltan Kövecses 2007; Semino 2008;). Oral discourse texts were collected through recording and transcribing of participants' oral discourse.

The control and experimental groups each had the same mean scores on the pre-tests. Each group was taught in a separate classroom. They were taught by the researcher. The classrooms were similarly equipped and lesson scheduling was similar. The classroom equipment and scheduling plan will be described in detail in section 3.4. After the treatment, post-tests and post-study questionnaires were administered. The collected data were then ready for analysis.

3.3. Participants

The participants (see table 3.2) were a group of randomly selected adult English language learners (n=53) enrolled in Isfahan University and Islamic Azad University (Khorasgan branch). Isfahan University is a major university in Iran. It has over 20,000 students, and the Foreign Language Faculty includes Linguistics, English Literature, Second language Acquisition, and English Translation/Interpretation Departments offering degrees at the undergraduate and graduate levels (Masters and PhD programs).

Islamic Azad University is a big university with over four hundred branches in Iran. It has also branches in the U.A.E, United Kingdom, Tanzania, Lebanon and Armenia. The Khorasgan branch is one of the branches located in eastern Isfahan. It has over 12,000 students. The Language Faculty includes Linguistics, Second language Acquisition, and English Translation/Interpretation Departments at the undergraduate and graduate levels (Masters and PhD programs). The researcher used to teach as a sessional instructor in both universities. That work experience was an asset both for the conduct of the experiment and in participant enrolment.

Isfahan University and Islamic Azad University (Khorasgan branch) are both excellent universities in the Isfahan region. The students at both universities are admitted through a nation-wide university entrance exam. Isfahan University is a state university and students do not pay tuition while students at Islamic Azad University are required to pay tuition for the same education. For many courses, the same professors teach at both universities.

The learners (19 males, 34 females) were all from Iran and all had a Persian L1 background. According to the data gained from the background questionnaires, all were interested in improving their English language proficiency. Mean age of the participants was 22 for males and 21 for females. They all had studied English as a foreign language in their home country, Iran, and in the classroom setting. This was important for the study as we needed to screen out those who had learned their English in non-classroom settings or in a different country. Such learners might have had cultural exposure unavailable to local classroom learners. They had all started learning English in middle school at the age of twelve, and had been admitted to language programs in Iranian universities after taking a University Entrance Exam.

Table 3.2. Grouping of randomly enrolled participants in experimental and control groups

Participants	Experimental Group	Control Group
Female	17	17
Male	9	10
Total	26	27

Students completing secondary school education in Iran must take a University Entrance Exam (called Konkoor) in order to be admitted to university. The participants in the present research had all taken the exam before starting their undergraduate education in the field of English Translation. This was an advantage as students who had similar English language proficiency could be accepted as research participants.

The pre-questionnaire asked whether participants had lived in English speaking countries or had extended stays in foreign countries for the purpose of learning English. It also asked whether participants had a native speaking English teacher or had long-term contact or communication with native speakers of English. The pre-questionnaire also sought to identify potential participants who had a family member or a friend who was a proficient/native speaker English or had learned English in an English-speaking environment. Candidates who answered positively to at least one of these questions were screened out. The participants in the research had to have a history of learning English in Iranian ESL classrooms. Other ways of English learning could act as a confounding variable adversely influencing the data.

It was not difficult to select qualified participants who had only learned English in a classroom setting because ESL classrooms are the dominant means of English language learning in Iran, and within the classroom, coursebooks are the most favoured course materials. The participant enrolment procedure started at the Foreign Language Departments of Isfahan University and Islamic Azad University, Khorasgan branch. Both universities are two-semester institutions, though certain courses are offered during the summer semester as well. It was therefore straightforward to attract a good number of volunteers for the project.

The difficult part was how to inform the students of the project. Contrary to western universities in which email offers a quick expedient for informing large numbers of people, students at Iranian universities are usually informed through bulletin board announcements or classroom-to-classroom mini-lectures regarding the research and how to register as a participant. This was a time-consuming process. It was also necessary to have permission for the bulletin board announcement and inviting students to sign up.

The researcher and some former professors gave mini-lectures at the beginning of each class in order to invite students to join the participant pool. The announcement did not give details of the research nor its goals, but was merely a brief invitation. The announcement stated that participation in the research was an opportunity for students to improve their English language proficiency, particularly in the specific cultural areas taught in the research classroom.

The researcher subsequently held two orientation meetings explaining participants' duties before, during and after the treatment courses. Also, scheduling concerns, the enrolment procedure, questionnaires and the pre/post-tests were introduced. Volunteers with low language proficiency in English (below 70 on the TOEFL iBT) were not qualified for this research. It was a requirement for students in both the control and experimental groups to interact in English through their language skills.

Three of the online teachers from Canada joined the orientation meetings on Oovoo (an instant messaging system similar to Microsoft's Skype that allows registered users to communicate through free instant messaging, voice, and video chat) and brought some information about the time zone differences between Vancouver and Isfahan. Two of them shared their experiences as online teachers during the pilot study. They also explained the topic of the course materials— 'Life on Campus'. Online teachers were not all native speakers of English but all possessed excellent proficiency in terms of all English language competencies including conceptual skills. This was evaluated before they were admitted for the online training course.

93 students volunteered and agreed to do the pre/test and the pre/questionnaire. After the TOEFL iBT scores were collected and pre-questionnaire evaluations were filled out, the researcher screened out the participants who were not qualified due to low scores or the background of their prior English language learning.

Sixty-two volunteers were admitted to join the control and experimental groups. During the experiment, some of the participants either quit or did not do the post-tests. Finally, the experiment was finished and the data were collected from 53 participants.

The research could not be done at Isfahan University labs because the time of starting and finishing of the classes did not match the official hours of the university and its staff. Accordingly, a private ESL school equipped with high speed internet and other required classroom tools was chosen for the study. This allowed the classes to start earlier than at the universities. Online teachers in Canada and their availability needed to be balanced with availability of the students in Iran. The time needed to be convenient and practical for both sides.

Classes met in a rented language lab and in six classrooms in the ESL school. The classes for both the control group and the experimental group were held every other day from 7.30 A.M. to 1.00 P.M. The control group had classes on odd days and the experimental group joined the classes on even days. Friday is the weekend in Iran, so the classes were held six days a week. The experiment started on Tuesday, 7 June 2011 at 7.30 A.M. Iran time which was 6 June 2011 8.00 P.M. Vancouver time. The plan was to finish the classes by the end of July, 2011. However, there were occasional Internet disconnections. And on one day, an online teacher did not join to teach his class. These exigencies extended the research and it was terminated at the end of the first week of August, 2011.

3.4. Instruments and Procedure

The research included four stages: the pre-test and pre-questionnaire phase, the treatment phase, the post-test and post-questionnaire phase, and the delayed post-test phase. I turn now to a closer look at each of these.

3.4.1. *Pre-test phase*

For the pre-test phase, each student did the pre-questionnaire and the TOEFL iBT in person. The TOEFL iBT was an authentic version of the test; however, having the test on just a single CD, each participant took the test individually. Thus, It took some time to give the test to all participants but the accuracy of the evaluation task was an asset.

The TOEFL iBT is a test that evaluates how well a candidate combines listening, reading, speaking and writing skills to perform academic tasks. Test takers are required to perform tasks that combine more than one skill. For example,

- Read, listen and then speak in response to a question;
- Listen and then speak in response to a question;
- Read, listen and then write in response to a question; and
- The following table shows the times and nature of each section of the TOEFL iBT.

Table 3.3. TOEFL Sections

Section	Time Limit	Questions	Tasks
Reading Section	80 minutes	56 questions	3 passages from academic texts
Listening Section	60 minutes	34 questions	Listening questions on lectures, classroom discussions and conversations
Break	10 minutes		
Speaking Section	20 minutes	6 tasks	Giving an opinion; speaking evaluation based on reading and listening tasks
Writing Section	50 minutes	2 tasks	Essay writing and interactive writing test

Because the test is composed of 100% academic questions and tasks, many universities consider it the most appropriate test to use when making admission decisions.

The other section of the pre-test phase probed metaphor density through an evaluation of test-takers' written and oral texts. For the written text production, participants were asked to write a composition on the topic 'Life on Campus'. This topic was selected for the study because participants were familiar with it.

The time limit was 40 minutes for a 250-word composition. The time and length limit were based on the standards of international tests such as IELTS (International English Language Testing System). All participants took this test at the same time on the same day. The test was conducted at the ESL school where the research classes were held. For the writing test and to get the appropriate text size from each participant, the researcher asked all participants to write at least 27 lines with normal size letters on

prepared sheets. This way, no one produced less than the required size. After the written test, the oral test was conducted. Each interview lasted between 40 and 50 minutes. The opening part of the interview was for greeting purposes to create a pleasant atmosphere for the interviewee. All questions and greetings were the same for all the interviewees. The interviews were recorded and transcripts made for the metaphor identification process. The number of words in each transcript text could be more than what was required, but 250 words from beginning were the text required text for analysis. This created a process of metaphor identification out of an equal number of words for all participants (250 words). If the number of words in both written and oral texts exceeded 250 words, only the 250 words from the beginning of each text were analyzed.

Metaphor density was measured by two coders employed throughout the study. Two trained and competent coders under the supervision of the researcher performed the metaphor identification procedure of the writing and speaking sections in the study. They were native speakers of English and senior students in Linguistics at Simon Fraser University. They were familiar with the context of life on campus. The coders attended regular classes and meetings for theoretical and practical procedures of metaphor identification. They read articles and book chapters on this procedure. Practical examples were given to them during the training. They were instructed to act consistently and precisely based on the methodology given. Once there was a difference in metaphor identification decision, the conflicts were discussed and precise decisions were made in meetings. To assist the coders, the researchers sometimes provided Farsi conceptual information in meetings where necessary. For instance, one of the participants had written 'Expressions of relationship' to mean 'Family relationship'. From the word for word translation (Farsi to English) I realized what the participant meant. So I provided this information to assist the coders (see sections 3.4.3 and 3.8 for more examples).

To carry out the measurement of metaphor density, a variety of methods have been used over the years. These methods have a lot in common. (Cameron 2008; Cameron & Maslen 2010; Danesi 1995; Low 2008; Pragglejaz Group 2007; Semino 2008). The metaphor identification procedure in the current study will be described in detail in section 3.7.

As Table 3.4 shows, the pre-questionnaires include a background questionnaire and a cultural knowledge questionnaire. Through the background questionnaire, participants' history of English learning was checked. This study required participants who had learned English in a classroom setting in Iran. The cultural knowledge questionnaire demonstrated the participants' interest in cultural learning and their background cultural learning in the area under investigation. For example, had any of the participants had a chance to travel abroad or had meaningful contact with native speakers, especially for learning English in the area of the study – 'Life on Campus'? The cultural knowledge questionnaire also determined the range of participants' contact with authentic English sources in the 'Life on Campus' cultural area (see Appendix A).

Table 3.4. Tests and Questionnaires

Groups	Pre-tests	Post-tests	Pre-study Questionnaires (before treatment)	Post-study Questionnaires (after treatment)
Control	1-IBT (Language Proficiency Evaluation)	1-IBT (Language Proficiency Evaluation)	1-Background Information	1-Treatment Evaluation
	2-Oral and written discourse metaphor density test.	2-Oral and written discourse metaphor density test.	2-Cultural knowledge	2-Cultural knowledge
Experimental	1-IBT(Language Proficiency Evaluation)	1-IBT (Language Proficiency Evaluation)	1-Background Information	1-Treatment Evaluation
	2-Oral and written discourse metaphor density test.	2-Oral and written discourse metaphor density test.	2-Cultural knowledge	2-Cultural knowledge

Once the pre-tests and pre-questionnaires were done by the participants, I used the pre-questionnaires to screen out participants who were not qualified for the study. These were mostly individuals who had learned English in non-classroom settings or had a family member or a friend who was a native speaker of English. Also, participants whose TOEFL score was less than 70 were not accepted, as stated earlier, since in both control and experimental groups participants needed to be at a level of language proficiency to communicate exclusively in English. On the questionnaire, participants were asked whether they were interested in improving their knowledge of English, and all participants expressed their interest in the pre-test questionnaire. The positive reply to

this question was significant for the study because the researcher expected the participants to have positive motivation for English learning.

Following the screening procedure, the participants were again randomly selected for the control and experimental groups. The data gained from the pre-tests (TOEFL iBT and written/oral discourse text metaphor density tests) allowed the researcher to have two equal groups with equal mean test scores.

3.4.2. Treatment phase

The treatment phase included conducting both control and experimental classes. Current ESL coursebook approach used in Iranian classrooms was applied for the control class and an authentic material approach was for the experimental class. Classes were held and taught in Zabansara Institute, a major ESL school in Isfahan, Iran. Both control and experimental classes were taught by the researcher on the specific topic of 'Life on Campus'. 12 sub-topics of 'Life on Campus' were selected to be covered in both classes. These sub-topics are shown below. They were clear, narrow and specific in order to give the students sufficient relevant content on each topic. This provided the desired metaphorical control and an effective focus during the treatment for each class. Accordingly, there were twelve lessons each concentrating on a specific topic relating to students' activity on campus. The headings of the lessons (topics) were:

1. The library and its services
2. Applying for graduate studies
3. Gym on campus
4. Career services on campus
5. Residence on campus / off campus
6. Financial aid / bursaries
7. Teaching assistantships /research assistantships
8. Co-op work/ work study
9. Letter of intent and proposal
10. Professors and their teaching methods
11. Ethics approval
12. Exchange student

Control group

The researcher had experience teaching EFL/ESL classes for over 15 years in Iran by the time this study started. Thus, he was fully aware of the coursebook approaches common in Iranian EFL classes. For this study, the researcher taught both control and experimental classes. After the treatment, participants in each group evaluated their classes by filling out the post-study questionnaires.

The control group treatment with a textbook base was the same as the prevalent method used over the years in Iranian SLA classrooms. To develop appropriate materials for the control class the relevant chapters of the internationally-developed coursebooks for the topic 'Life on Campus' were selected. The coursebooks were the ones which have been commonly used in Iranian ESL classrooms (see section 2.7). Among the 12 topics, there were topics for which there was not a matching lesson developed in the available coursebooks. Finding a lesson on 'Ethics Approval' is an example. For such topics, well-developed lessons were made by a specialist team. The team was made up of an associate professor at Isfahan University Language Department, two PhD candidates in TESL, and the researcher of the study. Finally, the appropriate customized coursebook including 12 homogenous lessons was ready for the class (see Appendix S).

ESL coursebooks are normally supplemented by workbooks, instructional listening and video drills that are non-authentic materials. There are also recommended 'Teacher's Guide' books containing directions about the methodology that should be used in the classroom. In the control classes, the teacher used supplementary materials that are common in such classes (listening drills, workbooks, instructive videos and the like). Students were seated in rows from front to back facing the whiteboard and the teacher (see Appendix P for sample photos of classes).

Experimental group

The experimental group students were taught based on authentic English materials delivered through CALL techniques and tools. Each tool assisted the students in its own way to boost interaction with authentic sources of English. The study did not intend to find out the role of each tool. For example, no attempt was made to learn

whether videos are more effective than VOIP (Voice over Internet Protocol), but they were all taken as one — tools to bring authenticity to the classroom.

Tables 3.5 and 3.6 display the technologies that were used as mediators of language learning. One of the teacher's roles was to determine which technology might best match pedagogical objectives (Erben et al. 2008).

Table 3.5. Main mediation tools

Mediator	Main Focus (Examples of major applications)
Email	Interaction with teachers, Receiving assignment, Submitting written assignment, Troubleshooting, Asking questions
VOIP	Talking live to on-line teacher, trouble-shooting, discussion
Instant Messaging	Asking questions such as spelling of words while on VOIP
On-line Materials	Source for teacher to provide materials for teaching, for example, YouTube or Concordance (instances of a particular linguistic expression from a corpus)
Video	The research team's production to boost authenticity of instruction and topic related parts

Table 3.5 displays the tools that were applied as the main mediating tools in the experimental classes (the treatment group). The main mediating tools were the ones that were applied regularly based on the class syllabus for the appropriate section of each lesson. A model class syllabus for the unit on 'Library and its services' plus the details about such mediators is presented in Appendix Q.

There were other mediators referred to as supplementary mediating tools, and they were used from time to time in class or were recommended to students to use at home for doing their assignments. For example, the teacher frequently used online dictionaries and translators for purposes such as practicing difficult structures and learning about the contextual patterns. Also, presentation software was helpful for students' oral presentations and group discussion. Table 3.6 shows some of these supplementary mediating tools.

Table 3.6. Supplementary mediation tools

Mediator	Main Focus
Presentation Software	Software designed for creating presentations (PowerPoint)
Concordance*, Online Dictionaries and Translators	For learning about the context and usage of terms; denotative and connotative meanings

* *Instances of a particular linguistic expression from a corpus, with part of the preceding and following co-text (Semino 2008:226).*

In the following, I elaborate on the mediators and their application.

Email: E-mails provided exchanges between teacher and student, student and teacher, student and student, and anyone outside the classroom. Students could send e-mails to the online teacher, too. For those interested, sources were introduced to find a key pal (key pals are people who regularly communicate with each other through computer facilities and Internet such as email, Skype, text-message channels).

Voice over internet protocol using Skype and ooVoo: These provided the capability for language learners to see and talk to their Canadian English native speaking teachers.

Online sources: Textbooks were not used in the experimental classroom. Part of the required materials was provided through online sources such as reading texts and listening exercises. The teacher gave the relevant materials on each topic to students prior to the classroom session (see appendices Q and R.).

Video: The researcher and the volunteers who assisted with the study had made videos based on the real life experiences of SFU students on campus. The videos were on the 12 topics of lessons listed in Section 3.4.2. The videos length was different based on the topic, but on the average, each video was 15-20 minutes. These visualized lesson content as much as possible while using authentic language throughout.

Online teachers

Apart from the researcher, who was the teacher for both control and experimental groups, there were 16 online Canadian teachers (12 regulars and 4 on standby) for the experimental groups.

In January 2011, the researcher started to recruit interested volunteers in Canada for joining the training sessions of online teaching. Advertisements were aimed at SFU students. Apart from three online teachers who had assisted the researcher for the pilot study in Summer 2010, 28 undergraduate and graduate students from SFU replied to an advertisement through email and expressed their interest in joining the training course. After interviewing the applicants, 16 were accepted into a training course for online teaching through VOIP (Voice Over Internet Protocol). The volunteer online teachers were trained how to do their part in the study. There were 12 lessons and discussion plans were created for each topic or lesson. The online teachers assisted the researcher with the discussion plan creation. Online teachers navigated their online classes based on the discussion plans. A sample discussion plan is given in Appendix R.

Each online teacher needed to have both active Skype ID and ooVoo ID. ooVoo was the software for teaching the Iran online classes from Canada. Skype was the one through which the researcher communicated with the online teachers.

The researcher had created six ooVoo ID's and all online teachers were added to the six ooVoo lists — one for each group of students. The reason for having six different OoVoo ID's was that up to 6 online classes could be active at the same time under the supervision of six online teachers.

The scheduling of the online teachers had been clearly and precisely planned a week before the experiment started. The grouping of the students for online classes was also another requirement that had been taken care of before the start date. During the experiment, three unexpected events (students' absences, an online teacher's absence, and Internet interruptions) required the researcher to reschedule several classes. When Internet interruptions occurred, the best way to control the situation was by making a long distance telephone call. This helped several times as both sides one in Canada and the other in Iran could be supervised by the researcher.

In the experimental group, no textbook or coursebook was used. Materials were all authentic texts from real world English, for example, from websites related to the topic of the class, online newspapers and magazines, movies, real daily conversations and

speeches, You Tube, and online dictionaries. Even the materials in the online teachers' lesson plans were from the same sources. The videos made for the experimental group were not like instructive videos made for coursebooks, rather each was recorded as authentically as possible.

The setting for the experimental class was circular so that every member could see one another. The population of each online class was four or five students. This number of students could be easily taught using a webcam by the online teacher from Canada. All online teachers acted well and engaged the students in their classes.

The classes terminated in the first week of August. The experimental group classes terminated a few days later as some classes were cancelled during the experiment due to Internet problems and online teachers' absences. The following list displays the identical features in both groups.

Identical features for both groups:

- Participants both males and females
- 114 hours classroom attendance
- Time, place, and controllable conditions of classroom
- 12 topics relating to 'Life on Campus'
- Teacher (the researcher taught both classes)

3.4.3. Post-test

For the post-test section, TOEFL iBT and tests of written/oral discourse texts' metaphor density were repeated. The procedure of the post-test was the same as the pre-test procedure described in 3.4.1.

There were two types of questionnaires given to the participants after the post-tests. The post-study questionnaire (treatment evaluation) evaluated the teacher's instruction in each class, as well as the methods applied. The cultural knowledge questionnaire (see Appendix A) was given to the participants after the treatment again. This assisted with the comparison of the participants' pre/post cultural knowledge. The cultural questionnaire also evaluated the effect of each treatment on the development of conceptual skills. This was measured through degree of markedness in participants'

discourse. Markedness was defined as the degree of inappropriateness in which L1 concepts are carried by L2 structures and words (Danesi 1993).

The cultural questionnaire included questions on each lesson topic. Participants were required to write a 40-word paragraph on each cultural topic before and after the treatment (in the pre/post cultural questionnaire) to show their knowledge of that topic. The responses were helpful for two reasons. First, they were a check on their knowledge of the topic before the treatment. Second, the comparison of the information each participant provided demonstrated the efficacy of each treatment.

The questions in the cultural questionnaire were open-ended and were quantified based on the degree of markedness of the response on each item. Two coders judged each response on the pre-treatment and post-treatment cultural questionnaire and scored the paragraphs on a five-point scale.

- Zero for a paragraph with no information or a wrong concept development
- 1 for a poor illustration and description or a concept development based on L1
- 2 for a relevant concept development though a highly marked one
- 3 for an acceptable and relevant concept development; very low degree of markedness
- 4 for an unmarked response

Kecskes and Papp (2000) and Danesi (1993) agree that even if students develop high levels of communicative proficiency, but continue to think based on their L1 conceptual system, they may be understood, but their discourse may be inappropriate or marked. In fact, they may use L2 words and structures to carry their own L1 concepts. The following examples taken from participants' discourse illustrate degrees of markedness. Apart from the grammatical mistakes, many bad forms are conceptual errors transferred from Farsi into English. That is, they have conveyed the concept from Farsi into English while the concept is still Farsi but the terms are English.

The conceptual errors which lead to marked discourse are underlined in the participants' quoted sentences, and the italicized forms are the way they could be repaired to be unmarked or less marked.

- "They could borrow till 4 books". (They could borrow *up to* 4 books).

- "If someone is accepted in state university his tuition is free". (If someone is accepted in state university, *their* tuition is free)
- "In some condition we can exchange our university". (*Following the regulations, we can transfer to a different university*).
- "It's a good way to keep our body in shape beside studying". (It's a good way to keep our body in shape *while* studying)
- "We can apply for a job related to our study to *get* experience and make money beside studying". (We can apply for a job related to our *area of study* to *gain* experience and make money *while* studying).
- "The time of this job is about 4 or 8 month". (The *Duration* of this job is about *four to eight months*).
- "In general, the most important services that my university provides for us divided into two groups". (In general, the most important services that my university provides for us *are* divided into two groups).

Over the course of the program, some students dropped out and some did not show up for the post-tests. This reduced the number of participants to 27 and 26 respectively in the control and experimental groups for analysis of the data.

After the post-test, the researcher expressed his appreciation for the participation of the students and promised to provide them with the results of the study. Also, they were asked to join the delayed post-test session in four months' time. To motivate the participants to take the delayed post-test, the researcher planned a small end-of-the-research party in which the participants received gifts and compensation for their cooperation. The delayed post-test was given on December, 14, 2011.

3.5. Data Reliability

Reliability provides information about whether the data collection procedure is consistent and accurate (Seliger & Shohamy, 1989). The reliability of a research instrument is related to the degree to which the instrument administration leads the researcher to the same results on repeated trials. The tendency and degree of consistency gained in repeated measurements is defined as reliability (Carmines & Zeller, 1979). To achieve reliability in the present study, quantitative and qualitative data collection was undertaken. The metaphor identification procedure was managed by two

competent coders under the supervision of researcher. Also, the instrument (test) used in the study was an authentic TOEFL iBT (see Table 3.7).

Validity of instrument, the degree to which a test measures what it is supposed to measure, is a crucial concern. The pre-test/post-test design is a useful way of mitigating confounding variables and ensuring that an experiment has a strong level of internal validity. The principle behind the design of the study is relatively simple, and involves randomly assigning subjects between two groups: An experimental group and a control group. Both groups are pre-tested, and both are post-tested. The internal validity of this design is strong because the pre-test ensures that the groups are equivalent. The scores in the two pre-test groups were compared to ensure that the randomization process was effective. Also, the experimental design demonstrates internal validity because it allows the researcher to compare the final post-test results. The researcher can see how both groups changed from pre-test to post-test, whether one, both or neither improved over time. These are all to evaluate the effectiveness of the randomization process and also to determine whether the group given the treatment showed a significant difference from the control group.

The validity of the design was further demonstrated as the pre-test conditions, which were the same for all participants. Also, as the randomly selected participants in both groups joined the classes on different days (odd and even days), they were isolated from one another and thus the data were not contaminated.

Table 3.7. Types of data

Data Collection Method	Data Type
1. TOEFL iBT (Evaluation of participants knowledge of English)	Quantitative
2. Written discourse metaphor density measurement	
3. Oral discourse metaphor density measurement (interview)	
1. Pre-questionnaire	Qualitative
2. Post-questionnaire	

For the qualitative data (see Table 3.7), structured questionnaires that provided uniform information assured the reliability and comparability of data (Kumar, 1996; Newman & Benz, 1998). The questionnaires were administered in person and this made

it resemble a structured interview. The questions asked for responses that were short (several words maximum), clear and predefined. The application of the cultural knowledge questionnaire as a parallel measure of conceptual skill and metaphor competence supported the validity and the reliability of data collection in the study. It acted like a check on reliability and showed a different way of measuring conceptual development in the two groups before and after the intervention.

As Table 3.4 shows, part of the data collection for metaphor density evaluation was through oral discourse, that is, interviews. The structured questionnaires and interviews, which have similar characteristics in terms of data collection, were applied in the procedure at different points and for different purposes of data collection. The pre-questionnaire was used to learn the participants' history (English language learning, length of language studies, setting of language studies, interests, weak areas of their English knowledge) and the post-questionnaire sought to learn the efficacy of the applied methods and the participants' comments and opinions on classes they received during the treatment. Interviews, which were part of pre/post-tests, assisted the measurement of metaphor density in oral discourse texts.

Interviewer effects were minimized by asking the same question of each respondent by the same interviewer. The location was controlled to avoid noise and distraction during the face to face interview. Warm-up questions were asked before each interview to ensure that the interviewees felt comfortable and were willing to share their views. The interviews were tape-recorded and the transcriptions were analyzed. The text size of each transcription was controlled (250 words). The tape-recording was done to ensure the accuracy of the data used in the subsequent analyses.

Assessing the quality of data collection procedure in the pilot study which was performed in Summer 2010 allowed the researcher to revise and, where necessary, modify the instruments on the basis of new information, thus improving the reliability of the procedure.

3.6. Metaphor analysis through a discourse dynamic procedure

Metaphor, as a significant way of thinking, is used in creating analogies and bridging ideas. Metaphor is also a very important channel of language use. We can identify peoples' thoughts and emotions, as well as their conceptualizations, through metaphors. Above all, metaphor acts like a tool in disciplines, such as applied linguistics and social studies, to provide us with information about people's thought and conceptualization. When people use language to present their thoughts, their conceptual skills influence their ability to manage the words and phrases for effectively expressing meaning in their social interactions (Cameron & Maslen 2010).

Different approaches to metaphor analysis have been applied in various studies (Cameron 2008; Cameron & Maslen 2010; Danesi 1995; Low 2008; Pragglejaz Group 2007; Semino 2008; Steen 2007). Danesi (1995) investigated metaphors at the sentence level. He computed an index of metaphorical density for each essay his participants had written. He calculated density simply through measuring the number of metaphorical sentences as a percentage of the total number of sentences written.

Pragglejaz Group (2007) introduced metaphor identification at the lexical level while a discourse dynamic procedure measured the number of metaphors at the word and phrase level (Cameron 2003; Cameron & Maslen 2010). A discourse dynamic approach considers metaphors as emerging from social interaction (Gibbs & Cameron 2008). Some cognitive linguists assume a separation of system and use (or 'grammar' and 'usage') that a dynamic approach resists (Freeman & Cameron 2008). This study identifies metaphor based on discourse dynamic procedure.

What the researchers look for in metaphor identification is, therefore, 'stretches of language' that might be metaphorical. According to Cameron and Maslen (2010), metaphor identification at the word level, as introduced in the Pragglejaz procedure, does not function well enough since neither language nor metaphor functions only at this level. Words individually may be functioning as metaphors, but in other cases a group of words are used together to act metaphorically. This view has been confirmed by other researchers as well (e.g., Semino 2008).

3.7. Metaphor identification methodology and the theoretical framework

Real world language use and metaphor are closely linked. The backbone of metaphor identification, a discourse dynamic procedure, is applied to language used in social interaction. This procedure is itself founded on Vygotsky's sociocultural theory (Cameron & Maslen 2010).

Metaphor in active language use is our object of concern and what was collected as data. Gesture or embodied metaphors were controlled and they are not counted as metaphors. To be more precise, linguistic metaphors were only counted in the data. "Linguistic metaphor" is operationally defined as:

words or phrases that can be justified as somehow anomalous, incongruent or 'alien' in the ongoing discourse, but that can be made sense of through a transfer of meaning in the context (Cameron & Maslen 2010: 102).

The word itself is not the linguistic metaphor. It is the vehicle term of the metaphor. The vehicle term may be clearly incongruous in its discourse context when the metaphor is obvious or it can display conventionalized characteristics.

Conventionalized metaphors are usually processed without consciously paying attention to their incongruity, for example, "running into difficulty — a process of bad luck in terms of movement to the inside of something or healthy or sick financial situation" (Cameron & Maslen 2010: 4). The words or phrases used in a metaphorical sense must be both semantically incongruous with the topic of the discourse at that point, and also, support a transfer of meaning so that sense can be made of the word or phrase in context, for example, the word *enemy* in "*terrorism as an invisible enemy*" (Cameron & Maslen 2010: 102).

To identify the linguistic metaphor precisely, the coders followed the steps introduced for the metaphor dynamic procedure:

- The coder familiarizes her/himself with the discourse data
- Possible metaphors in the data are investigated

- Each possible metaphor is checked for
 - its meaning in the discourse
 - the existence of a more basic meaning for the word
 - a contrast of meaning between primary meaning and the meaning transferred from the context

If the possible metaphor satisfies the above-mentioned criteria, it is a metaphor (Cameron & Maslen, 2010). "Primary meanings are not necessarily the most frequent meanings of the words or phrases" (Cameron & Maslen, 2010: 106). In other words, "each word or phrase in the data is checked to see if it satisfies the two conditions for metaphor:

- There is a contrast or incongruity between the meaning of the word or phrase in its discourse context and the primary meaning. Primary meaning tends to be more concrete, more precise (as opposed to vague), and historically older; together with
- A transfer of meaning that enables that contextual meaning to be understood in terms of basic meaning" (Cameron & Maslen, 2010: 105).

As described in the above, for metaphor identification in discourse, when the incongruous words or phrases are identified, they are referred to as metaphor vehicle terms. They display a metaphor but they are only a part of it. A linguistic metaphor, conventionally formulated, may include a vehicle term and be combined with a topic term, for example, "Jack is a pig" where "Jack" is the metaphor topic and "pig" is the metaphor vehicle. In most cases, the incongruous metaphor vehicle word or phrase needs to be identified based on the flow of discourse as the topic is implicit and is not present. The following sentences from Farsi show the contrast (in Farsi a person is addressed as a 'lion' to show that he is brave).

- Javantarin hamkelase man shir ast. (My youngest classmate is a lion).
- Shir gol zad dar mosabeghe. (The lion scored in the match)

In this study, linguistic metaphor vehicle terms were identified in the transcribed spoken or written texts and used as the primary unit of analysis. There is metaphorical thinking that never shows itself in language, but that is not our concern, and cannot be while discourse is our only source of data. Linguistic metaphor refers to the instantiation

in language of conceptual metaphor as well. Therefore, the application of the term linguistic metaphor does not restrict it in this way.

Although the procedure of identification and analysis seems straightforward, the final step of identification — making a decision whether a word or phrase functions as a metaphor — was sometimes not easy. This complexity has been reported in different studies (Semino 2008). The following instances illustrate the procedure. The excerpts are taken from the texts produced by the students. The underlined words or phrases are the target words checked. As the following examples show, The Collins Cobuild Advanced Learners Dictionary (2003) was the source of reference. This dictionary was used in Cameron and Maslen's (2010) discourse dynamic procedure of metaphor identification as well.

Examples 1 and 2

"The campus is beautiful. It's become to feel like a second home, and I have a few favorite spots to curl up and do reading for my classes, or even just to eat lunch with a friend".

Spot (from The Collin Cobuild Dictionary 2003):

- Spots are small, round, coloured areas on a surface
- Spots on a person's skin are small lumps or marks.
- If you have a spot of something, you have a small amount of it.
- You can refer to a particular place as a spot.

Decision: Spot is identified as a metaphor

Curl up (from The Collin Cobuild Dictionary 2003):

- If a person or animal curls into a ball, they move into a position in which their body makes a rounded shape. Curl up means the same as curl., phrasal verb (e.g., She curled up next to him...).

Decision: Curl up is not a metaphor.

Example 3

"Through the cooperative education program, many students are able to experience a career in their field first-hand and meet potential

future employers while continuing to work toward completing their academic program".

First-hand (from The Collins Cobuild Dictionary 2003):

- First-hand information or experience is gained or learned directly, rather than from other people or from books.

Decision: First-hand is not a metaphor.

Example 4

"There are some people called liaison librarians at the library for every subject area who help the lost and confused students to overcome hidden research roadblocks".

Roadblocks (from The Collins Cobuild Dictionary 2003):

- When the police or the army put a roadblock across a road, they stop all the traffic going through, for example because they are looking for a criminal.

Decision: Roadblocks is a metaphor.

3.7.1. *Native speakers and metaphor density*

To have a model of comparison, ten native speakers of English were randomly selected at Simon Fraser University. They were asked to produce written and oral discourse texts in a similar way to that of the research participants. A metaphor density evaluation of the texts was carried out. The mean was seven metaphors in the written text (minimum four; maximum ten). In the oral text, the mean was eight metaphors (minimum five; maximum eleven). These measurements were based on a 250-word text on the topic 'Life on Campus' when an academic style of discourse was produced. These data are used in Chapter 4 for comparisons between the control and experimental groups.

3.8. Reliability and validity of metaphor identification

To use metaphor as a research tool we need first to identify metaphors in relevant discourse; we need to consider why these metaphors were used at their

particular points in the discourse activity, i.e., the discourse function of the metaphors. We need to find patterns in metaphor use and function.

In this study, the reliability and validity of metaphor identification was crucial to note. The reliability of metaphor identification was important for consistency across the study. Accordingly, the coders followed the discourse dynamic procedure in a consistent way to identify the metaphors all through the study. In terms of validity, checking every word of the data set was the appropriate strategy so as not to miss any metaphors. Also, it was necessary to stick precisely to the analysis of the discourse to decide the metaphor contribution in the discourse event. For example, prepositional metaphors may seem insignificant out of context, yet they may carry a metaphorical function in the discourse text.

Knowing the background of the discourse text is fundamental in the identification of metaphors because metaphorical content is more apparent in context. The coders who identified the metaphors in the texts were not only aware of the mechanism of metaphor function, but knew enough about life on campus as they were students at Simon Fraser University.

To summarize, some of the prominent methodology features for the metaphor identification in the study were:

- Close attention to the validity and reliability of metaphor identification;
- A robust theoretical framework for the identification procedure;
- Application of a method that is known as 'trustworthy';
- Trained coders familiar with the discourse and texts;
- Application of a systematic and consistent process of identification; and
- Double checking of the procedure and check across coders for inter-coder reliability. (Cameron & Maslen 2010)

3.9. Chapter Summary

This chapter has outlined the research design and the study procedure in detail. A central quantitative approach enriched by the qualitative data from questionnaires was adopted. Furthermore, the research design supported the data collection and allowed a

comprehensive analysis of the research questions. The data were collected through the three main phases of pre-tests, post-tests and delayed post-tests. Questionnaires provided data for a qualitative analysis as well. Validity and reliability were enhanced through a combination of quantitative and qualitative approaches.

4. Results

4.1. Introduction

An analysis of the research data gathered through the administration of pre-tests, post-tests, and delayed post-tests is presented in this chapter. This chapter also presents an analysis of questionnaire data.

The data set from the study design—pre-test, post-test, and delayed post-test design—includes repeated measures data. To do the analysis, a repeated measures ANOVA and a mixed ANOVA (Split-Plot ANOVA) were applied. Split-Plot ANOVA was used as there was a repeated measures independent variable and a between groups independent variable. In repeated measures (also called within-subjects) analyses, the software SPSS (Statistical Package for the Social Sciences) created the within-subjects factor or independent variable from the variables in the study. For each variable there were two levels where the delayed post-test was not required and three levels where the delayed post-test was required. The delayed post-test was not taken into account unless the post-test results were given (see 4.3.3 and 4.34).

A repeated measures design is able to factor out some of the variation that occurs within individuals since it considers the same individuals with at least two different measures. The independent variables were TOEFL iBT and the four language skills evaluated by this test (listening, speaking, writing, and reading), written discourse metaphor density (WMD), and oral discourse metaphor density (OMD). There were 7 independent variables in total. TOEFL and the language skills had two levels and there were three levels for the two other independent variables (WMD and OMD). The dependent variable for the data was the score participants received in the different tests. Group (control vs. treatment/experimental) was a between-subjects independent variable.

4.2. Assumptions of Repeated Measures ANOVA and Split-Plot ANOVA

The assumptions of repeated measures ANOVA are normality of data, homogeneity of variance and sphericity. The assumptions for Split-Plot ANOVA are the same as they are for repeated measures ANOVA. All these assumptions were tested using SPSS before the analysis phase. The requirements for the assumptions were met through standard procedures (Larsen-Hall, 2010). Note that sphericity is not a problem if there are only two levels under analysis (Leech, Barret & Morgan, 2005).

To determine the normality of the data, SPSS 18 was utilized. Appendix J shows that the assumption of data normality is satisfied. Relevant histograms are displayed in appendices E, F and G for all tests (pre/post-tests of TOEFL, pre/post-tests of listening, writing, speaking and reading skills, pre/post-tests of written discourse metaphor density, and pre/post-tests of oral discourse metaphor density).

The other assumption for the repeated measures ANOVA and split-plot ANOVA is the homogeneity of variances. SPSS results indicate that the significant values are more than 0.05, and therefore the null hypothesis of homogeneity of variance is not rejected (Appendices K and L). Repeated measures ANOVA and split-plot ANOVA include Levene's test based, from which it is possible to demonstrate the fulfillment of this homogeneity of variance as well (Appendix N). After learning about the fulfillment of normality and homogeneity assumptions of the data, as well as the fact that the data have been collected through a random selection of participants, the analysis through repeated measurement ANOVA and split-plot ANOVA is presented.

4.3. Repeated measures ANOVA/quantitative data analysis

According to the study design and the development of the experimental stages, two sections are introduced for better understanding of the analysis:

- TOEFL and the four language skills data analysis; and
- Written discourse metaphor density and oral discourse metaphor density data analysis of the control group and the experimental group.

4.3.1. TOEFL iBT data analysis

For this section, there are two levels (time measures) for each main effect: TOEFL, listening skill, writing skill, speaking skill, and reading skill while interaction is a between groups effect. The two levels are due to the fact that each participant did the test twice: a pre-treatment test and a post-treatment test. The split-plot ANOVA applied is a 2x2 ANOVA as there are two levels in the repeated measures. The between-subjects group has two groups, a control group and an experimental group as well.

There were 26 participants in the control group and 27 in the experimental one. Table 4.1. illustrates TOEFL descriptive statistics data. It has two levels: pre-TOEFL and post-TOEFL. Also, the control and experimental groups are displayed while the mean for pre-TOEFL is almost the same for both control and experimental groups. They are 80.6 and 80.3 for the control and experimental groups, respectively. Comparing the means of the groups at two levels (pre/post stages), we can observe the increase in both groups. Table 4.1 shows that in control group the increase is from 80.6 to 82.6, and for the experimental group it is from 80.3 to 83.2. In the following (Tables 4.2 and 4.3), statistical operations will indicate whether the difference is significant.

Table 4.1. Descriptive statistics

Tests	Group	Mean	Std. Deviation	N
Pre-TOEFL	Con.	80.6538	4.21371	26
	Exp.	80.3704	5.65786	27
Post-TOEFL	Con.	82.6538	4.14673	26
	Exp.	83.7778	4.98145	27

Con., Control Group

Exp., Experimental Group.

The independent and dependent variables, the relevant research questions, and the null hypothesis of this part of the statistical analysis are given below.

- Independent variable (between-subjects) = Group
- Independent variable (within-subjects) = Pre/post-tests
- Dependent variable = Test score

Research questions

- Do the scores differ between the pre-test and the post-test (main effect) and between the control group and the experimental group (main effect)?
- Is there an interaction between tests depending on whether participants are in the control group or the experimental group?

Null Hypothesis

- Scores are not going to increase from first level to second level, and there is no interaction between tests whether participants are in the control group or the experimental group.

The study seeks to answer the questions whether main effects can be observed for the pre-tests and post-tests as well as the control and experimental groups for language skills. Also, is there an interaction between tests and groups? Before pursuing the statistical analysis further, i.e., tests of within-subjects and between-subjects, note that the assumptions required for these tests have been fulfilled (see Appendices M and N). Table 4.2 shows the results from the tests of the within-subjects effect for TOEFL.

Table 4.2. Tests of within-subjects effects (TOEFL iBT)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
TOEFL	Greenhouse-Geisser	193.646	1.000	193.646	80.124	.000	.611	80.124	1.000
TOEFL Group	Greenhouse-Geisser	13.118	1.000	13.118	5.428	.024	.096	5.428	.628
Error (TOEFL)	Greenhouse-Geisser	123.259	51.000	2.417					

Table 4.3 shows the results of between-subjects effect for TOEFL iBT.

Table 4.3. Tests of between-subjects effects (TOEFL iBT)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	710128.150	1	710128.150	16200.838	.000	.997	16200.838	1.000
Group	4.678	1	4.678	.107	.745	.002	.107	.0628
Error	2235.473	51	43.833					

A mixed ANOVA was conducted to assess whether there were group and test differences in TOEFL iBT scores. Results indicated a significant main effect of test levels (pre-test/post-test), $F(1.00, 51.00) = 80.12, p \leq 0.05$, but no significant main effect for group, $F(1, 51.00) = .107, p \leq 0.05$. Also, the test levels (pre-test/post-test) main effect was qualified by a significant interaction between test level and group, $F(1, 51.00) = 5.42, p \leq 0.05$. This indicates that even though as a general rule, the experimental group does not score higher or lower than the control group on TOEFL iBT, the experimental group's score was different from control group's (Tables 4.2 and 4.3).

The findings show that English language academic knowledge was improved in both groups. The scores did not prove a main effect between the control group and the experimental group and there was no significant difference between the groups for TOEFL iBT. However, the group results and the means on the post-tests display a difference between the experimental and the control group although the difference is not statistically significant. The means of both groups on pre-test were almost similar (80.6 for control group and 80.3 for experimental group) while the experimental class scored higher on the post-test. Figure 4.1 illustrates the pre-test and post-test means of TOEFL.

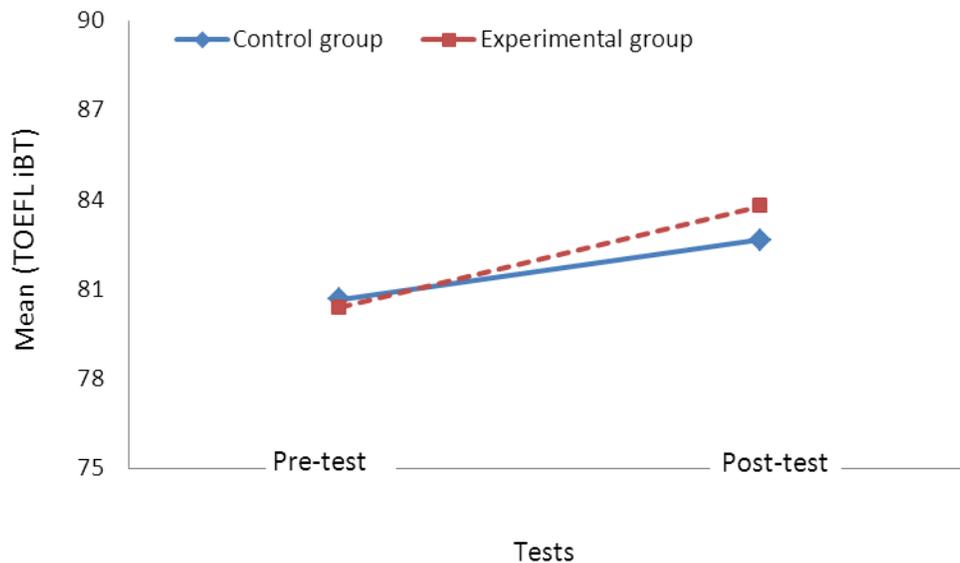


Figure 4.1. Pre-test/Post-test TOEFL means

The line graph in Figure 4.1 indicates that both groups have improved their scores in the post-tests as the means have risen. The graph also shows that the

experimental group scored higher than the control group though it is not a statistically significant difference.

4.3.2. *Language skills data analysis*

At this stage, the data for the four language skills tested through TOEFL iBT will be analyzed. Table 4.4 shows language skills descriptive statistics.

Table 4.4. Descriptive statistics (language skills)

Tests	Group	Mean	Std. Deviation
Pre-listening	Control	20.5385	1.72582
	Experimental	20.4074	1.94658
Pre-writing	Control	19.6923	1.37896
	Experimental	19.6296	1.92450
Pre-speaking	Control	19.7692	1.63236
	Experimental	19.8148	1.56984
Pre-reading	Control	20.6538	1.52164
	Experimental	20.5185	1.67264
Post-listening	Control	21.0385	4.17833
	Experimental	21.0370	4.92277
Post-writing	Control	19.9615	1.34107
	Experimental	20.6296	1.73534
Post-speaking	Control	20.0769	1.69524
	Experimental	21.1111	1.82574
Post-reading	Control	21.5769	1.41910
	Experimental	21.0370	1.50308

Con., Control Group

Exp., Experimental Group

There are two levels of pre-test and post-test (time measures) for each main effect while interaction is a between groups effect. For each language skill, two levels of pre/post-test are identified. Also, the control and experimental groups' means for the pre-tests are almost the same for all language skills: For the control group and the experimental group, respectively, the means for listening are 20.5 and 20.4; for writing

19.69 and 19.62; for speaking 19.7 and 19.8; and for reading 20.6 and 20.5. An increase can be observed from pre-test to post-test in all of the language skills' means.

Table 4.5 shows the results from the tests of a within-subjects effect for listening.

Table 4.5. Tests of within-subjects effects (listening skill)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Listening	Greenhouse-Geisser	8.451	1.000	8.451	9.093	.004	.151	9.093	.841
Listening Group	Greenhouse-Geisser	.111	1.000	.111	.120	.731	.002	.120	.063
Error Listening	Greenhouse-Geisser	47.398	51.000	.929					

Table 4.6 shows the results from the tests of a between-subjects effect for listening.

Table 4.6. Tests of between-subjects effects (listening skill)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	45646.871	1	45646.871	11218.884	.000	.995	11218.884	1.000
Group	.116	1	.116	.029	.866	.001	.029	.053
Error	207.506	51	4.069					

Tables 4.5 and 4.6 show that a mixed ANOVA was administered to assess whether there were group and test differences in the TOEFL iBT listening scores. Results indicated a significant main effect of test levels (pre-test/post-test, $F(1.00, 51.00) = 9.09, p \leq 0.05$), but no significant main effect for group, $F(1, 51) = .029, p \leq 0.05$. Also, the test levels (pre-test/post-test) main effect was not qualified by a significant interaction between test level and group, $F(1, 51.00) = .120, p \leq 0.05$. This indicates that the control group and the experimental group did not score differently on the TOEFL iBT listening pre/post-tests.

The second language skill is reading whose data analysis on tests of within-subjects effect is related in Table 4.7.

Table 4.7. Tests of within-subjects effects (reading skill)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Reading	Greenhouse-Geisser	13.763	1.000	13.763	10.588	.002	.172	10.588	.891
Reading Group	Greenhouse-Geisser	1.084	1.000	1.084	.834	.365	.016	.834	.146
Error Reading	Greenhouse-Geisser	66.293	51.000	1.300					

Table 4.8 shows the results from the tests of a between-subjects effect for reading.

Table 4.8. Tests of between-subjects effects (reading skill)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	46491.925	1	46491.925	13977.092	.000	.996	13977.092	1.000
Group	3.019	1	3.019	.908	.345	.017	.908	.155
Error	169.641	51	3.326					

Tables 4.7 and 4.8 display that a mixed ANOVA was used to see whether there were group and test differences in TOEFL iBT reading scores. Results indicated a significant main effect of test levels (pre-test/post-test), $F(1.00, 51.00) = 10.58, p \leq 0.05$, but not of group, $F(1, 51) = .908, p \leq 0.05$. Also, the test levels (pre-test/post-test) main effect was not qualified by a significant interaction between test level and group, $F(1, 51.00) = .834, p \leq 0.05$. This indicates that the control group and the experimental group did not score differently on the TOEFL iBT reading pre/post-tests.

For the receptive skills (listening and reading), the scores did not demonstrate a main effect between the control group and the experimental group, and there was no significant difference between the groups. This indicated that the study did not find the groups differed from each other in listening and reading skills development. In other words, the participants in both the control group and the experimental group demonstrated a difference from pre-test to post-test but not between the control group and the experimental group.

Following the data analysis of the receptive skills (listening and reading), writing data will be presented. Table 4.9 shows the results from the tests for a within-subjects effect for this language skill.

Table 4.9. Tests of within-subjects effects (writing skill)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Writing	Greenhouse-Geisser	10.669	1.000	10.669	26.467	.000	.342	26.467	.999
Writing Group	Greenhouse-Geisser	3.537	1.000	3.537	8.774	.005	.147	8.774	.828
Error Writing	Greenhouse-Geisser	20.558	51.000	.403					

Table 4.10 shows the results from the tests for a between-subjects effect for writing.

Table 4.10. Tests of between-subjects effects (writing skill)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	42292.880	1	42292.880	8749.012	.000	.994	8749.012	1.000
Group	2.427	1	2.427	.502	.482	.010	.502	.107
Error	246.535	51	4.834					

As Tables 4.9 and 4.10 display, a mixed ANOVA was applied to assess whether there were group and test differences in TOEFL iBT writing scores. Results indicated a significant main effect of test levels (pre-test/post-test), $F(1.00, 51.00) = 26.4, p \leq 0.05$, but not of group, $F(1, 51) = .502, p \leq 0.05$. Also, the test levels (pre-test/post-test) main effect was qualified by a significant interaction between test level and group, $F(1, 51.00) = 8.7, p \leq 0.05$. This indicates that even though as a general rule, the experimental group does not score higher or lower than the control group on the writing part of the TOEFL iBT, the experimental group's score was different from control group's.

Figure 4.2 shows the pre-test and post-test means for writing in both the control and the experimental groups.

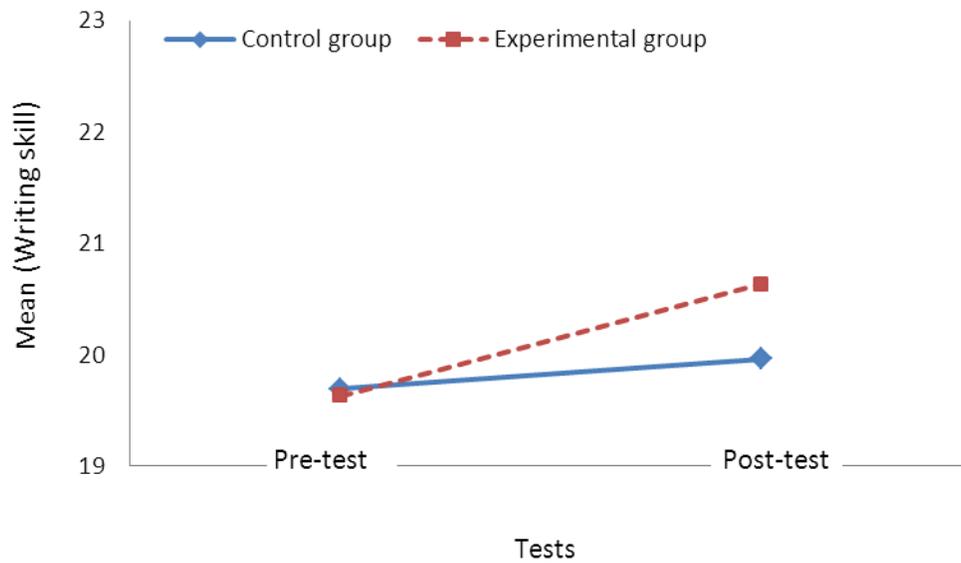


Figure 4.2. Writing skills and pre-test/post-test means

According to Figure 4.2, the experimental group performed better than the control group as their mean is higher. The means for the experimental and control groups are, respectively, 20.6 and 19.9 for the writing post-test, but this difference is not a statistically significant one.

The last language skill measured by the TOEFL iBT is speaking. Table 4.11 shows the results of the tests for a within-subjects effect for speaking.

Table 4.11. Tests of within-subjects effects (speaking skill)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Speaking	Greenhouse-Geisser	17.039	1.000	17.039	38.477	.000	.430	38.477	1.000
Speaking Group	Greenhouse-Geisser	6.473	1.000	6.473	14.617	.000	.223	14.617	.963
Error Speaking	Greenhouse-Geisser	22.584	51.000	.443					

Table 4.12 shows the results from the tests for a between-subjects effect for speaking.

Table 4.12. Tests of between-subjects effects (speaking skill)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	43206.967	1	43206.967	8264.833	.000	.994	8264.833	1.000
Group	7.721	1	7.721	1.477	.230	.028	1.477	.222
Error	266.618	51	5.228					

For TOEFL iBT speaking skills, a mixed ANOVA was also applied to find out whether there were group and test differences in TOEFL iBT speaking scores. Results showed a significant main effect of test levels (pre-test/post-test), $F(1.00, 51.00) = 38.4$, $p \leq 0.05$, but no significant main effect for group, $F(1, 51) = 1.4$, $p \leq 0.05$. Also, the test levels' (pre-test/post-test) main effect was qualified by a significant interaction between test level and group, $F(1, 51.00) = 14.6$, $p \leq 0.05$. This indicates that even though as a general rule, the experimental group did not score higher or lower on the speaking part of the TOEFL iBT than the control group, the experimental group's score was different from that of the control group though the difference is not a statistically significant one (Tables 4.11 and 4.12). Figure 4.3 shows the pre-test and post-test means for control and experimental groups.

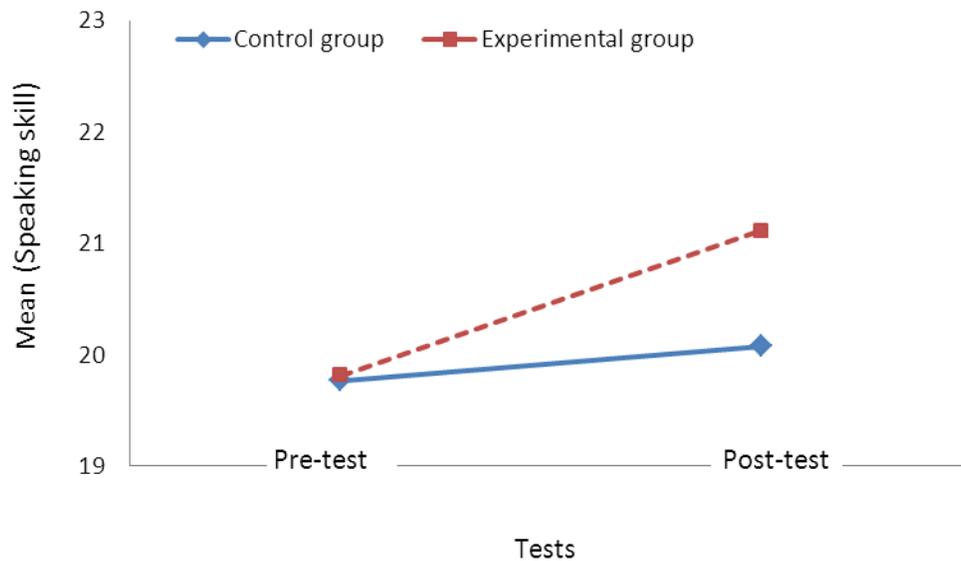


Figure 4.3. Speaking skill and per-test/post-test means

Figure 4.3 indicates that experimental group performed better than the control group as the experimental group mean is higher. The means for experimental group and control group are, respectively, 21.11 and 20.07 on the speaking post-test.

The findings about the productive skills did not prove a main effect between the control group and the experimental group, and there was no significant difference between the groups. However, the results for writing and speaking display a difference between the experimental and the control group based on the post-test means of productive skills. The difference is due to the higher scores of the experimental group though the difference is not a statistically significant one.

4.3.3. Pre-test and post-test on written and oral discourse metaphor density data analysis

To analyze metaphor density in both written and oral discourse, split-plot ANOVA and repeated measures ANOVA tests were used. As discussed above, the assumptions of normality and the homogeneity of variances were met (see Appendices J and L). Table 4.13 illustrates the descriptive data for written and oral discourse metaphor density.

Table 4.13. Descriptive statistics (WMD* and OMD)**

Test	Group	Mean	Std. Deviation
Pre-WMD	Con.	2.4231	1.33186
	Exp.	2.3333	1.33012
Post-WMD	Con.	2.84462	1.43366
	Exp.	4.7778	1.69464
Pre-OMD	Con.	1.9615	1.18257
	Exp.	2.00	1.27098
Post-OMD	Con.	2.8077	1.38620
	Exp.	4.5556	1.73944

Con., Control Group

Exp., Experimental Group

**Written Discourse Metaphor Density*

*** Oral Discourse Metaphor Density*

There are two levels (time measures) for each main effect in written discourse metaphor density (WMD) and oral discourse metaphor density (OMD) while a between groups effect is the interaction for each as well. Two levels are introduced for each as participants did the test twice: Pre-treatment test and post-treatment test. At this stage, the results from the post-test data are required before deciding about the statistical use of delayed post-tests. Accordingly, the split-plot ANOVA applied at this stage is a 2x2 ANOVA as there are two levels in the repeated measures ANOVA, and the between-subjects group also has two groups: The control group and the experimental group.

Table 4.13 contrasts the means of the control and the experimental groups in terms of selected descriptive statistics. Each column shows data for both pre/post-tests and groups. When we observe the mean from pre-tests to post-tests, the means for the experimental group, both written discourse metaphor density and oral discourse metaphor density, are almost double those of the control group.

Figure 4.4 displays the pre-test and post-test means for written discourse metaphor density.

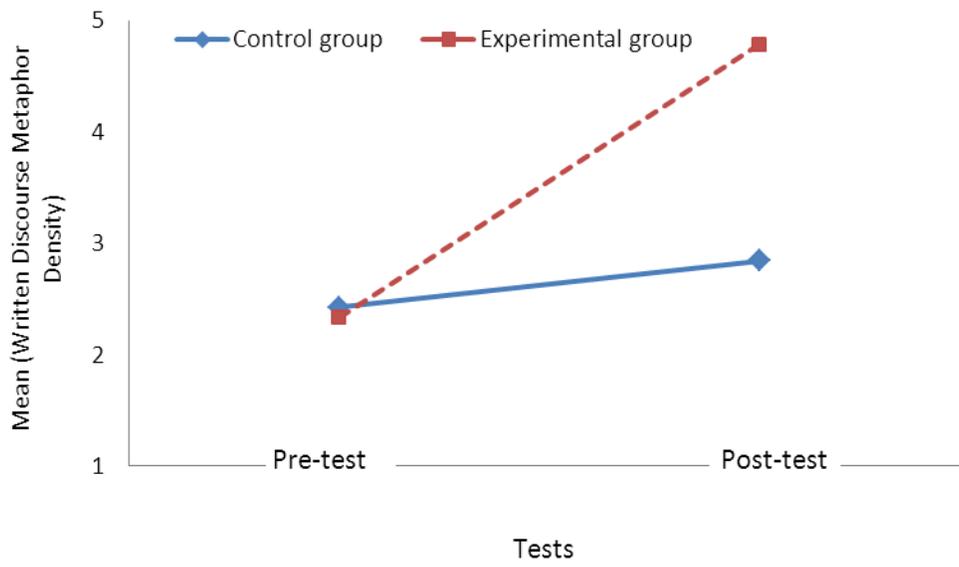


Figure 4.4. Written text metaphor density and pre-test/post-test means

Figure 4.5 displays the pre-test and post-test means for oral discourse metaphor density.

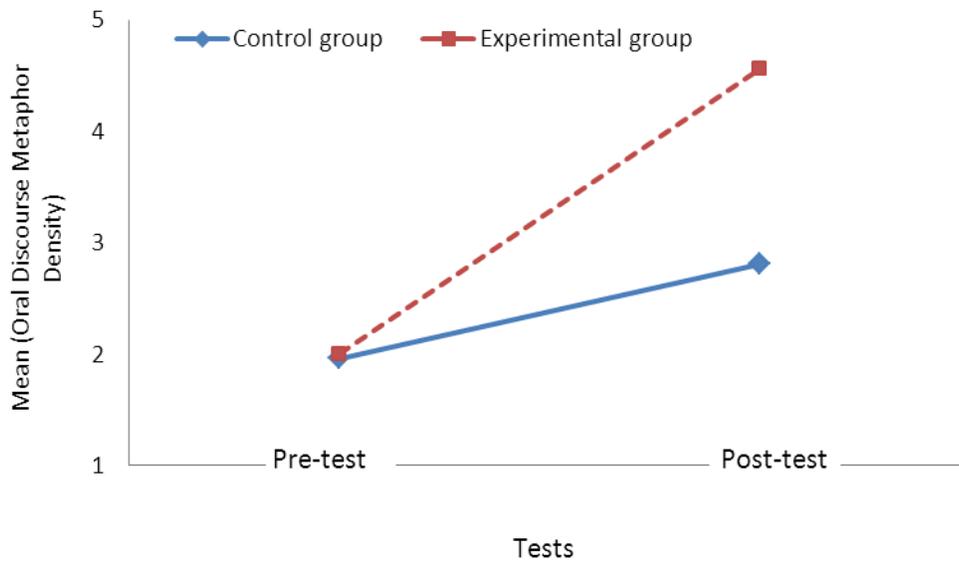


Figure 4.5. Oral discourse metaphor density and pre-test/post-test means

Figures 4.4 and 4.5 indicate that both groups got better scores in the post-tests as the means have risen. To examine possible effects and interactions, consider the following.

Table 4.13 illustrates two levels of pre-WMD/OMD and post-WMD/OMD. Also, the control and experimental groups are displayed and the means for pre-WMD/OMD are seen to be almost the same for both:

- For WMD, the control and experimental group means are 2.4 and 2.3, respectively.
- For OMD, the control and experimental group means are 1.9 and 2.0, respectively.

Comparing the means of groups at two levels of pre/post, we observe the increase in both groups. For WMD in the control group the increase is from 2.4 to 2.8, and for the experimental group it is from 2.3 to 4.7. In the case of OMD, the control group mean increased from 1.9 to 2.8, and for the experimental group the mean increased from 2.0 to 4.5. In the following, the variables, the relevant research question and the null hypothesis for this section are given:

- Independent variable (between-subjects) = Group
- Independent variable (within-subjects) = Pre/post-test
- Dependent variable = Score on metaphor density

Research questions

- Do the scores differ between the pre-test and the post test (main effect) and between the control group and the experimental group (main effect)
- Is there an interaction between test and group?

Null Hypothesis

- Metaphor density scores are not going to increase from first level to the second level (pre-test to post-test), and there will be no interaction between tests and group.

Appendices M and N demonstrate that it is indeed appropriate to perform within-subjects and between-subjects tests. Table 4.14 shows the results from the tests of within-subjects effect for written discourse metaphor density.

Table 4.14. Tests of within-subjects effects (WMD*)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
WMD	Greenhouse-Geisser	54.456	1.000	54.456	85.437	.000	.626	85.437	1.000
WMD	Greenhouse-Geisser	27.060	1.000	27.060	42.454	.000	.454	42.454	1.000
Group									
Error	Greenhouse-Geisser	32.506	51.000	.637					
WMD									

**Written Discourse Metaphor Density*

Table 4.15 shows the results from the tests for between-subjects effects for written text metaphor density.

Table 4.15. Tests of between-subjects effects (WMD*)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	1015.071	1	1015.071	281.518	.000	.847	281.518	1.000
Group	22.467	1	22.467	6.231	.016	.109	6.231	.688
Error	183.891	51	3.606	183.891				

**Written Discourse Metaphor Density*

To assess whether there were group and test (level) differences in written discourse metaphor density, a mixed ANOVA was conducted. Results indicated a significant main effect both of test levels (pre-test/post-test), $F(1.00, 51.00) = 85.4$, $p \leq 0.05$, and of group, $F(1, 51) = 6.23$, $p \leq 0.05$. Also, the test levels (pre-test/post-test) main effect was qualified by a significant interaction between test level and group, $F(1, 51.00) = 42.4$, $p \leq 0.05$. This indicates that the experimental group's score was different from the control group's score (Tables 4.14 and 4.15). Merging the results from tests of between-subjects effects, tests of within-subjects effects, and the means (Figure 4.4), we can conclude that the experimental group scored higher than the control group and the difference is statistically significant. This conclusion is based on the observed main effects for pre-test and post-test, as well as the control and experimental groups.

Table 4.16 shows the results from the tests for a within-subjects effect for oral discourse metaphor density.

Table 4.16. Tests of within-subjects effects (OMD*)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
OMD	Greenhouse-Geisser	76.635	1.000	76.635	78.127	.000	.605	78.127	1.000
OMD Group	Greenhouse-Geisser	19.352	1.000	19.352	19.729	.000	.279	19.729	.992
Error OMD	Greenhouse-Geisser	50.026	51.000	.981					

*Oral Discourse Metaphor Density

Table 4.17 displays the results from the tests for a between-subjects effect for oral discourse metaphor density.

Table 4.17. Tests of between-subjects effects (OMD*)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	849.359	1	849.359	281.938	.000	.847	281.938	1.000
Group	21.133	1	21.133	7.015	.011	.121	7.015	.738
Error	153.641	51	3.013					

*Oral Discourse Metaphor Density

To assess whether there were group and test (level) differences in oral discourse metaphor density, a mixed ANOVA was conducted. Results indicated a significant main effect both of test levels (pre-test/post-test), $F(1.00, 51.00) = 78.1, p \leq 0.05$, and of group, $F(1, 51) = 7.01, p \leq 0.05$. Also, the test levels (pre-test/post-test) main effect was qualified by a significant interaction between test level and group, $F(1, 51.00) = 19.7, p \leq 0.05$. The result from tests of between-subjects effects, tests of within-subjects effects (interaction of OMD and group), and the means on pre-test and post-test (Figure 4.5) show that the experimental group scored higher than control group and the difference is a statistically significant one. This conclusion is based on the observed main effects in level and group (Tables 4.16 and 4.17).

To conclude, the main effects and the interaction of tests and groups for both written and oral discourse metaphor density prove that the experimental group did far better than the control group from pre-test to post-test. As Figures 4.4 and 4.5 illustrate,

the means in the experimental group had a sharp rise from pre-test to post-test in written and oral discourse metaphor density while the control group shows less considerable improvement. This leads to a rejection of the null hypothesis. In other words, scores on written and oral discourse metaphor density increased from pre-test to post-test, and there was an interaction between tests and participants' in the control and the experimental groups.

4.3.4. *Pre-test, post-test and delayed post-test data on written and oral metaphor density*

In this study, knowing about the participants' language proficiency level was necessary for the evaluation of conceptual skills and metaphorical competence. TOEFL iBT assisted the study with this requirement. The study goals do not require pursuing TOEFL iBT scores in the delayed post-test section. This will be discussed in detail in section 5.3.

Learning the results from the pre-tests and post-tests, we are led to the last stage of quantitative data analysis. This is a three level analysis of pre-tests, post-tests, and delayed post-tests. Because of the significant difference observed only in the experimental group in WMD and OMD, it is necessary to discover the results of the interaction of the delayed post-tests and the pre/post-tests. To do so, a repeated measures one-way ANOVA with three-levels was applied.

In addition to the assumptions discussed for the a two-level repeated measures ANOVA, the assumption of sphericity needs to be satisfied for the three-level repeated measures ANOVA as well (see Appendix O regarding the sphericity assumption; Appendices G and J for histograms and the normality tests).

At first, the data analysis for written discourse metaphor density at the three levels of pre-test, post-test and delayed post-test will be pursued. Table 4.18 shows the results from the tests for a within-subjects effect for written text metaphor density at three levels of pre-test, post-test, and delayed post-test.

Table 4.18. Tests of within-subjects effects (WMD* at three level of pre/post and delayed post-tests)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
WMD	Greenhouse-Geisser	97.358	1.947	50.005	69.082	.000	.727
Error WMD	Greenhouse-Geisser	36.642	50.622	.724			

**Written Discourse Metaphor Density*

Results indicate a significant main effect of test levels (pre-test, post-test, and delayed post-test) for written discourse metaphor density, $F(1.94, 50.62) = 69.08, p \leq .05$. This means that the scores on the pre-, post- and delayed post-tests of written discourse metaphor density have a statistically significant difference. However, this overall F does not tell you which pairs of tests have significantly different means.

Table 4.19 displays the means for these different tests. It shows that the mean rose from 2.33 in written discourse metaphor density pre-test to 4.77 in written discourse metaphor density post-test and then, going through a slight decline, it reached 4.51 in the written discourse metaphor density delayed post-test.

Table 4.19. Descriptive statistics (WMD* at three level of pre/post and delayed post-tests)

WMD	Mean	Std. Error	99% Confidence Interval	
			Lower Bound	Upper Bound
Pre-WMD	2.333	.256	1.807	2.860
Post-WMD	4.778	.326	4.107	5.448
Delayed Post-WMD	4.519	.317	3.866	5.171

**Written Discourse Metaphor Density*

Table 4.20 reflects the difference between the pairs through a pairwise comparison.

Table 4.20. Pairwise comparison test (WMD* at three levels of pre-test, post-test and delayed post-test)

WMD Comparisons	Mean difference	Std Error	Sig.	99% Confidence Interval	
				Lower bound	Upper bound
Pre-WMD & Post-WMD	-2.444	.247	.000	-2.951	-1.938
Pre-WMD & Delayed Post-OMD	-2.185	.220	.000	-2.638	-1.732
Post-WMD & Delayed Post-OMD	.259	.217	.244	-.188	.706

**Written Discourse Metaphor Density*

According to Table 4.20, there is a significant difference between written discourse metaphor density pre-test and written discourse metaphor density post-test, as well as between written discourse metaphor density pre-test and written discourse metaphor density delayed post-test ($p \leq .05/3$). On the other hand, there is no significant difference observed for the written discourse metaphor density post-test and written discourse metaphor density delayed post-test ($p \leq .05/3$).

After learning about the written metaphor density at three levels of tests, we need to analyse the data for oral discourse metaphor density at the three test levels of pre-test, post-test, and delayed post-test. Table 4.21 shows the results from the tests for a within-subjects effect for oral discourse metaphor density at the three levels of pre-test, post-test, and delayed post-test.

Table 4.21. Tests of Within-Subjects Effects (OMD* at three levels of pre-test, post-test and delayed post-test)

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
OMD	Greenhouse-Geisser	99.580	1.687	59.021	54.986	.000	.679
Error OMD	Greenhouse-Geisser	47.086	43.867	1.073			

**Oral Discourse Metaphor Density*

The results indicate a significant main effect of test levels (pre-test, post-test, and delayed post-test) for oral discourse metaphor density, $F(1.68, 43.86) = 54.98$, $p \leq .05$. This means that the scores on the pre/post and delayed post-tests of oral discourse metaphor density have a statistically significant difference. However, this overall F does not tell you which pairs of tests have significantly different means.

Table 4.22 displays the means for these different tests. It shows that the mean rose from 2.00 in oral discourse metaphor density pre-test to 4.556 in oral discourse metaphor density post-test and, then, declined to 2.48 for the oral discourse metaphor density delayed post-test.

Table 4.22. Descriptive statistics (OMD* at three levels of tests)

OMD	Mean	Std. Error	99% Confidence Interval	
			Lower Bound	Upper Bound
Pre-OMD	2.000	.245	1.497	2.503
Post-OMD	4.556	.335	3.867	5.244
Delayed Post-OMD	2.481	.235	1.999	2.964

*Oral Discourse Metaphor Density

To identify the difference between the pairs, a pairwise comparison test generated the following result (table 4.23).

Table 4.23. Pairwise comparison test (OMD* at three levels of pre-test, post-test and delayed post-test)

OMD comparisons	Mean Difference	Std. Error	Sig	99% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Pre-OMD & Post-OMD	-2.556	.308	.000	-3.189	-1.922
Pre-OMD & Delayed Post-test	-.481	.216	.035	-.925	-.038
Post-OMD & Delayed Post-test	2.074	.244	.000	1.572	2.576

*Oral Metaphor Density

Table 4.23 shows that there is a significant difference between oral discourse metaphor density pre-test and oral discourse metaphor density post-test and this is what we have already learned about ($p \leq .05/3$). Also, there is a significant difference between oral discourse metaphor density post-test and oral discourse metaphor density delayed post-test ($p \leq .05/3$). The last pair is the oral discourse metaphor density pre-test and the oral discourse metaphor density delayed post-test for which no statistically significant difference was detected ($p \leq .05/3$).

Figure 4.6 displays the difference of means at three levels of pre-test, post-test, and delayed post-test between written discourse metaphor density and oral discourse metaphor density.

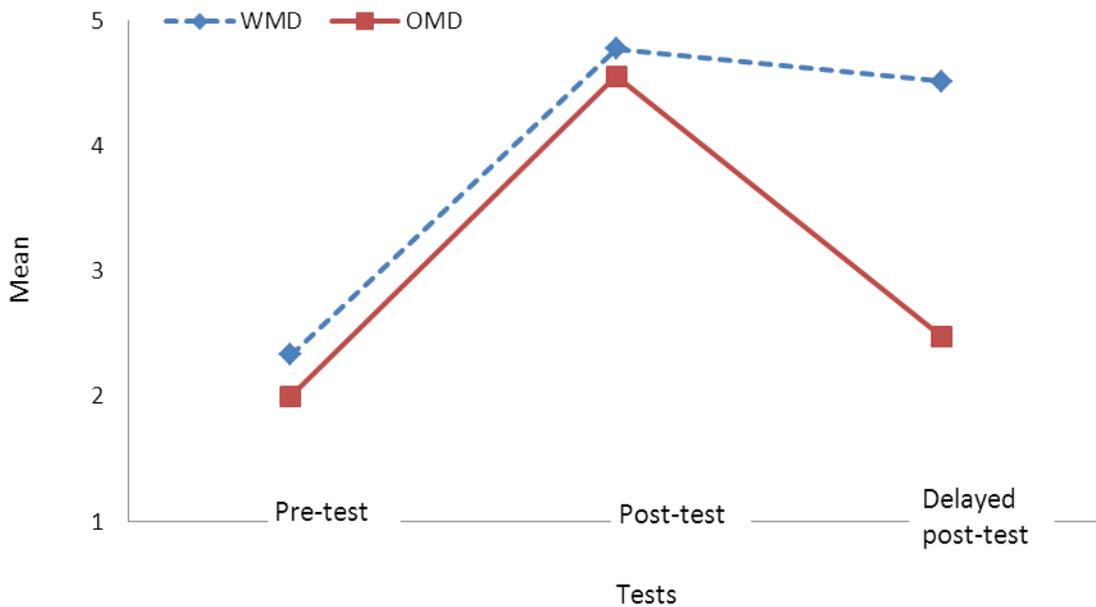


Figure 4.6. Pre-test, post-test and delayed post-test means for WMD (Written Discourse Metaphor Density) and OMD (Oral Discourse Metaphor Density).

The line graph in Figure 4.6 shows that means increase from pre-test to post-test in both written discourse metaphor density and oral discourse metaphor density. At the post-test stage, there is a slight decline for written discourse metaphor density while the decline in the case of oral discourse metaphor density is a sharp one. According to Figure 4.6, the mean for written discourse metaphorical density was 2.3 at pre-test and rose to 4.7 at the post-test level. It had a slight decline and reached 4.5 at the delayed post-test. For the oral discourse metaphor density, the mean was 2.0 at pre-test stage and rose to 4.5 at post-test stage. At the delayed post-test stage, it had a sharp decline and reached 2.4. Although it did not decline to the pre-test level, the mean did not show a significant difference between pre-test and delayed post-test.

Having presented the quantitative results, Section 4.4 focuses on the qualitative data analysis.

4.4. Qualitative data

The current section of qualitative data analysis is the presentation of ideas coming from questionnaires given to the participants. Questionnaires have the advantage of giving insight into the participant's own perspective along with, of course, the disadvantage of being subjective and not subject to disproof.

Among the three types of questionnaires used in the study, cultural knowledge questionnaire and treatment evaluation questionnaire were concerned with the qualitative data.

The questionnaires had both open-ended and close-ended questions. The reason for selecting both types is that each has its positive and negative points. Accordingly, each type of question was used in the best way possible to get the best feedback from the participants' side. The other benefit of having both types of questions is discovering the participants' ideas from two perspectives. One gives the participant the opportunity to express his or her opinion in a less restrictive manner and the other one makes him or her respond based in a well-developed framework.

4.4.1. *Cultural knowledge questionnaire*

The cultural knowledge questionnaire revealed the participants' interest in cultural learning in the areas of the study and their background cultural knowledge in the area under investigation (see Chapter 3 for more detail). As stated in Chapter 3, the cultural questionnaire included questions on each cultural topic. Participants had to write a 40-word paragraph on each topic before and after the treatment (in the pre/post cultural questionnaire) to demonstrate their knowledge of that topic. In this way, the degree of markedness could be measured between the pre- and post- cultural questionnaires. Markedness is defined as the degree of inappropriateness in which L1 concepts were carried by L2 structures and words (Danesi 1993). You can find examples of this kind in section 3.4.3.

The open-ended questions were quantified based on degree of markedness of the response. Two coders judged each response on pre-treatment and post-treatment cultural questionnaires and scored the paragraphs on a five level scale. In cases there

were different scoring on a section, a final score or an average of a final agreement was gained in a meeting.

- Zero for a paragraph with no information or a wrong concept development
- 1 for a poor illustration and description or a concept development based on L1
- 2 for relevant concept development though a highly marked one
- 3 for an acceptable and relevant concept development and very low degree of markedness
- 4 for an absolutely unmarked response

For the following topics, participants presented their description though the responses had a high degree of markedness.

- Library and its services
- Applying for grad studies
- Gym on campus
- Residence on campus/off-campus
- Financial aid and bursaries
- Teaching assistantship/Research assistantship
- Letter of intent and proposal
- Professors and their teaching methods

Here are some examples of what participants wrote. The responses are both marked and conceptually asymmetrical.

- Financial aid/bursaries

"Loan is one of the financial aids given to the students before each term and all the students can take it. Also, if you are one of the top three students in your faculty university gives you a reduction or discount."

- Gym on campus

"In Iran everybody who studies at university has to pass 4 courses of gym but cannot use gym more than it and it is not free. By student card we can go to another gym out of university."

- Apply for graduate studies

"In my country to apply for grad studies you should pass an entrance exam, and since it's kind of difficult, students should try to find probable sources for this exam during their undergrad studies."

The following topics were the ones that received incomplete, irrelevant, or no responses. This is probably because of a lack of these concepts in the participants' L1.

- Career services on campus
- Co-op work/ Work study
- Ethics approval
- Exchange student

There are some examples presented from what participants responded.

- Exchange Student

"In some condition we can exchange our university. There are some rules that we should be aware of them, for example we cannot do it in the first semester or in the last semester of our education. We must study at our university these 2 semesters. The other rule is that we cannot be an exchange student more than 2 terms."

- Ethics approval

"Sorry, I don't know much about it."

or

"Sorry, maybe I can write some sentences about these issues, but since I don't have the exact information about these, I prefer to write nothing."

The results showed that each group performed differently on the post-questionnaire. The control group average was 1 on the pre-questionnaire and reached 2 on the post-questionnaire while the experimental group had a rise from 1 to 3.

The results from the qualitative data supported and complemented the quantitative results. As stated above, the pre/post cultural questionnaire required students to provide a 40-word paragraph on the 12 topics covered in the treatment classes of both groups. The paragraphs produced by the participants were evaluated from 0 to 4 based on the degree of markedness.

The experimental group participants showed a better score on the post-questionnaire in comparison with control group participants. This indicates that the written discourse from the experimental group participants was less marked. Consequently, they were influenced by L1 concepts to a lower degree while a higher degree of L2 conceptual content played a role in their discourse. Moving from marked discourse towards unmarked discourse is a sign of conceptual improvement in the cultural area of “Life on Campus”.

4.4.2. Treatment evaluation questionnaire

The treatment evaluation questionnaire was an assessment tool for the classes in both groups. It was employed to help identify whether there was bias in the treatment. For the control group, the treatment needed to be as identical as possible to the Iranian EFL course-book classroom conduct. For the experimental group, the comments on the practicality and novelty aspect of the treatment were measured. Finally, the evaluation questionnaire could assess the participants' overall satisfaction with the treatment and any specific criticisms they had of it.

Table 4.24. Scale table for evaluating the class conduct in the control group

	Extremely Unacceptable	Very Poor	Poor	Average	Good	Very Good	Excellent
	-3	-2	-1	0	+1	+2	+3
Teaching construct					√		
Place of experiment					√		
Topic of the course				√			
Similarity of teaching method to your previous EFL courses					√		
Classroom in general sense						√	

To be more objective, a scale table was used. The students scored each row of the table. As displayed above, the treatment evaluation questionnaire included a scale table based on an anchoring and bipolar scale rating system through which students scored each row from -3 to +3. The scores were -3, -2, -1, 0, +1, +2, +3. Zero was the neutral score while a "+" score expressed positive and supportive comments on each

category of class activity and "-" scores indicated the weakness of the activity introduced in the row. The checkmarks on Table 4.24 show the evaluation mean for each of the items evaluated by the participants in the control group. For example, the evaluation mean for 'Topic of the course' was 0 which is an average score.

Table 4.24 also indicates that the teaching construct and method in the control group were evaluated similarly to what the participants observed in their previous ESL courses in Iran.

Table 4.25. Scale table for evaluating the class conduct in the experimental group

	Extremely Unacceptable -3	Very Poor -2	Poor -1	Average 0	Good +1	Very Good +2	Excellent +3
Teaching construct					√		
Place of experiment				√			
Topic of the course						√	
How you liked the teaching method					√		
Classroom in general sense						√	

Tables 4.24 and 4.25 show how the participants in the two different classrooms evaluated their classes. For the control group, the weak part was the topic of the course 'Life on Campus' while this was rated strongly by the experimental group. It might be concluded that methodology affected the attraction of the topic for students. Another explanation for this difference is the fact that EFL students usually receive topics of lessons in their coursebooks. Coursebooks do not offer counterparts to the 'Life on Campus' topic of this study. The experimental group gave weak points to the physical location of the experiment. This seems to be due to the equipment and space requirement for the use of authentic materials and a CALL-based approach. It is obvious that the experimental class required far more costly infrastructure, but this was beyond the researcher's affordability. Both groups gave a good mark to the classes in general. In the treatment evaluation questionnaire, participants could offer their final reflections. In

this regard, it is relevant and effective to present examples of the experimental class participants' comments:

"Finding new friends, get familiar with new teachers, talking to native speaker, get to know new cultures ,how to react to different people from different part of the universe, facing new attitudes ,finding a positive way to live, and ... many many other things and events I called them experience. I'm so happy that I was in this course and learn new things and above all. I am so happy that I finish it successfully."

"I like this period because it was a new experience to me and causes me to gain this opportunity to speak English with native and those students who studies abroad. They share their experience with us that were pretty useful. Also I get familiar with new concepts which before that I do not have any idea about them. We were in a warm, friendly environment. So, I really appreciate you and the teachers who teach us."

"We as English students need to make a relationship with native speakers, but because we are not exposing to them so this course was a valuable opportunity for us to talk to them. The subject of our conversation was authentic. So we knew lots of things about new ideas. But as a drawback the time of classes was not enough and the speed of internet was sometimes low. But this one was not their fault. It has lots of benefits for us. We find out that talking to a native speaker is not strange, and also know our weak and strength points. In general this period of our study time was useful and good."

Chapter five will present a detailed interpretation and discussion of both the quantitative and qualitative data results.

5. Discussion

5.1. Introduction

This study has been an effort to evaluate the hypothesis of facilitating conceptual fluency development in the language classroom among Persian learners of English through authentic material exposure by computer-assisted language learning (CALL) techniques. The EFL classroom in Iran is an example of second language classrooms with shortcomings in English language pedagogy (Hashemian & Talebinezhad 2007; Norafkan 2000; Sadeghi & Talebinezhad 2005; Talebinezhad & Vahid 2002). A prominent complaint and shortcoming reported about second language classrooms by both learners and their teachers is the gap between textbook English and authentic or real world English (Danesi 2003b; Hwang 2008). To clarify this failure of the second language classroom, particularly in Iran, researchers have found that EFL learners in classrooms rarely achieve high levels of metaphorical competence and conceptual fluency (Danesi 2008; Hashemian & Talebinezhad 2007).

The Iranian EFL classroom was the appropriate setting for the current study as it focuses on the artificial and unnatural English of the textbooks and lacks real exposure to life-like interactive language that learners require. In this study, CALL techniques were the tools (mediators) to bring authentic material to the classroom and facilitate a higher quantity of exposure and interaction by language learners with real world experience of the target language.

SCT, the theoretical perspective of the research, is a theory of mediated mental development; it is most compatible with theories of language that focus on "communication, cognition, and meaning rather than on formalist positions that privilege structure" (Lantolf & Thorne 2006, p. 4). This study hypothesized that a higher rate of exposure to authentic English language material might lead to a better development of metaphorical competence and conceptual fluency. Accordingly, the research questions

of the study are reviewed in this section and discussed in the following. The discussion of research questions is based on the results presented in Chapter 4.

- To what degree is conceptual fluency and metaphorical competence be affected by authentic materials and CALL-mediated instruction?
- By what means do authentic materials and CALL-mediated instruction impact learner outcomes with respect to conceptual fluency and metaphorical competence, i.e., is one of the four basic skills privileged over the others?
- Can we predict whether the findings of this study are generalizable to other learners in different settings?

It was hypothesized that the exposure to authentic sources would be an appropriate method of metaphorical skill improvement in the Iranian EFL classroom. In the following, a detailed discussion of each section of the results given in chapter 4 is presented.

5.2. English language proficiency in classroom SLA

EFL students in Iranian second language classrooms have demonstrated that the textbook approach is a successful method in the development of some degree of communicative competence. But it is just worth reminding ourselves that the fundamental failure of this approach is its inability to accommodate metaphorical language development thus constraining ultimate proficiency in a damaging fashion.

To identify how communicative and metaphorical competences are different, Danesi's studies (1992, 1994, 1995, 1998, 1999, 2003b, and 2008) were reviewed. This difference is outlined as follows:

Conceptual fluency theory straddles both linguistic and communicative (sociolinguistic) competence. It is about models of the world that come from culture and that are, of course, used in communication, but not only there. They manifest themselves in language, discourse, and cultural artifacts. So, it is a broader notion than communication competence. It posits that there is an underlying system of associative thought (metaphorical or generally figurative) that forms the backbone of language and its uses. (Danesi, personal communication 16, Feb, 2011)

In addition to the analysis and evaluation of metaphorical development, the research design mandated the use of English language proficiency measurement. Evaluation of language proficiency in this study had two main purposes. First, it was necessary to have two groups with similar language proficiency. Secondly, it was intended to learn whether any of the treatments practiced in the research might influence language proficiency development in a different way from the other.

The TOEFL iBT was used to measure the efficiency of each treatment in improving learners' language proficiency. TOEFL iBT is not a test to measure conceptual fluency or metaphorical skill in a direct way and it basically measures academic English language proficiency. However, the test does not exclude conceptualization in its design. Four major conceptual categories (linguistic resources, phonology, fluency, and content) are included in the evaluation design (Brown, Iwashita, & McNamara 2005). It is inevitable that a higher level of metaphorical language knowledge will lead to a higher language proficiency level. As a result, the aim here was to see whether the different approaches in the control and experimental groups might influence the participants' English language proficiency differently as measured in the TOEFL iBT.

The outcome of the data analysis showed that the scores of the TOEFL iBT differed between the pre-test and post-test in both groups. This main effect indicates that the textbook-based approach and authentic materials-based approach both assisted the learners in achieving a higher level of language proficiency. As noted earlier, although TOEFL iBT questions are designed to evaluate exclusively academic English language proficiency, it is hardly possible to claim that conceptual contents are absolutely excluded. Figure 5.1 illustrates the difference of means on the post-test.

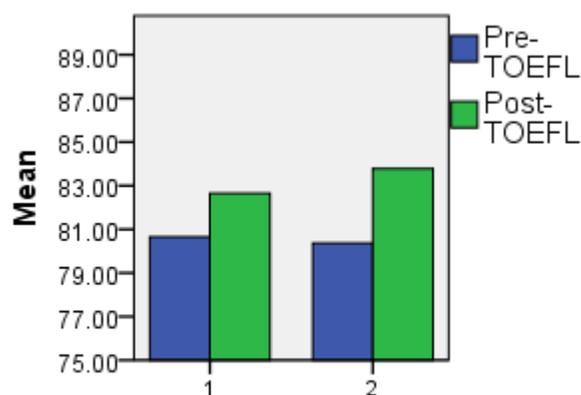


Figure 5.1. TOEFL pre/post-test means
 1 = Control group; 2 = Experimental group

The post-test mean for the experimental group is 83.7 versus 82.6 for the control group). For the test levels (pre-test/post-test), a main effect was qualified by a significant interaction between test level and group. This indicates that the experimental group's score was different from control group's (tables 4.2 and 4.3). The result of the means on the post-tests display a difference between experimental and control group though not statistically significant. There was no interaction identified between tests and whether participants are in the control group or the experimental group for TOEFL iBT.

The TOEFL iBT also evaluated the learners' English language skills. The language skills were both productive language skills (writing and speaking) as well as receptive language skills (reading and listening). The findings were different for these two types of language skills as will be discussed in the next section.

5.2.1. Receptive language skills

In the case of the receptive language skills (reading and listening), the results showed that the scores of listening and reading skills differed between the pre-test and post-test in both groups. This main effect showed that the textbook-based approach and the authentic material-based approach both supported the learners towards a higher level of language proficiency in listening and reading.

Figure 5.2 (listening) and Figure 5.3 (reading) both show that the means from pre-tests to post-tests are almost similar for English receptive skills in both the control and the experimental groups.

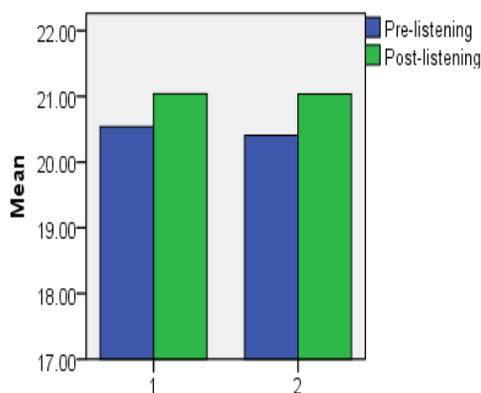


Figure 5.2. Listening skill
1 = Control group; 2 = Experimental group

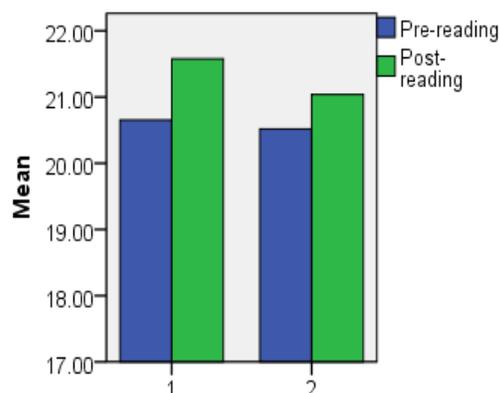


Figure 5.3. Reading skill
1 = Control group; 2 = Experimental group

The findings of the study on receptive language skills development in the Iranian EFL classroom support previous research on English language learning in Iran (Aliakbari & Nabi Karimi 2009; Hashemian & Talebinezhad 2007; Norafkan 2000). The researcher's experience in teaching in Iranian EFL classrooms and the previous literature advocate that the methodology and teaching construct of such classrooms place particular emphasis on the development of receptive skills. The students in current EFL classrooms in Iran almost always read and listen to materials presented in coursebooks, and the teachers force them to follow this way of learning. It is believed that the more they read and practice the content, the better they succeed in their second language learning progress.

According to Sadeghi and Talebinezhad (2005), the inability of state schools and universities to satisfy students' growing desire to learn English communicatively has resulted in a growing private sector of English teaching in the country. One important factor for parents' choice of a school for their children is the quality of English classes in that school. Due to limitations on state schools, private language institutes have simply attracted an increasing number of interested learners including young children and

adults. (Talebinezhad & Sadeghi 2005). Universities in Iran are also places in which English is taught in a range of independent fields of study such as English Language and Literature, Teaching English as a Foreign Language, and English Translation. Even university learners of English complain that either the programs do not prepare them for using English communicatively or they are so busy studying for the more difficult subjects of their major that they do not get a chance to use English effectively (Talebinezhad & Sadeghi 2005).

Although English is taught as a required subject both at universities and schools in Iran, many of the students attend private institutes' English classes in order to learn more and learn it better. There might be different reasons for this such as learners' higher expectations, weaker quality of regular schools' classes, and the growing number of students keen on learning English.

As a general rule for Iranian EFL classes, serious reading of the course materials and listening to prepared materials stand as key points in students' second language development. That might be the reason that Iranian EFL learners are much stronger in reading and listening in comparison with other skills. Studies of EFL classrooms in Iran, and my observation of classrooms in Iran during my career as an education director of Iranian EFL schools, support the claim about the lack of balance between receptive and productive skills training in coursebook approaches (Dahmardeh, 2009).

5.2.2. *Productive language skills*

For productive language skills (writing and speaking), the results illustrate that the scores on the writing and speaking section of the TOEFL iBT differed between the pre-test and post-test in both groups as they did with the receptive skills. In this respect, the main effect shows that the textbook-based approach and the authentic material-based approach both assisted the learners towards a higher level of language proficiency in writing and speaking.

Figures 5.4 and 5.5 illustrate the difference of means between pre-test and post-test for speaking and writing skills. When we compare pre-test/post-test means in receptive language skills and productive language skills, there is an obvious difference (see Table 4.4). Tables 4.5 and 4.7 did not show a main effect for receptive skills

between test level and group as there was no significant interaction between them, but for productive language skills results in Tables 4.9 and 4.11 indicated that a main effect was qualified by a significant interaction between test level and group. As a result, the study shows that the development of productive language skills and receptive language skills are different in Iranian EFL classrooms.

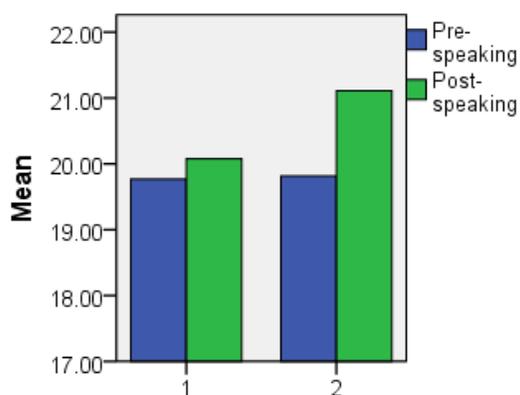


Figure 5.4. Speaking skill
1 = Control group; 2 = Experimental group

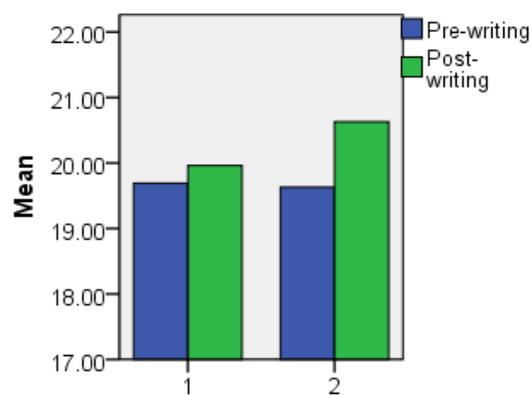


Figure 5.5. Writing skill
1 = Control group; 2 = Experimental group

It seems that the exaggerated focus on receptive language skills in Iranian coursebook-based EFL classroom teaching methodology leads to an imbalance between the productive and receptive skills in the control group. Observing the way EFL coursebooks are designed, we realize at once that the teachers inevitably are led to pay more attention to receptive skills practice. I do not mean that such coursebooks do not include any sections on productive skill practice. The teachers talk and the students listen. The students read the coursebooks and listen to the recorded parts of the book. In doing the exercises, the students again either read or listen to the sections made. In other words, if there is any speaking or writing interaction involved, it is limited, and accordingly, students are deprived of practice with productive skills in comparison with the receptive skills in English. Teachers, whether following teachers' guides to the coursebooks or following their own methodology, seem unable to break down this preponderance of receptive skills work because the coursebooks make it acceptable.

Dahmardeh's (2009) remarks in his study on language learning in Iranian classrooms and the analysis of EFL textbooks that "Iranian students have to study English as a foreign language for nearly seven years in the schools (3 years in middle school, 3 years in Secondary school and 1 year in Pre-University level), yet the education they receive neither enables them to attain satisfactory competence in using the English language nor helps them to interact with confidence" (p. 7). The results of my study also support Dahmardeh's investigation. As described above, this failure has two sides. On the one hand, EFL students require their productive language skills to be at a more stable level, i.e., better balanced with receptive skills. On the other hand, the students need to develop their conceptual skills in all language competencies.

The textbooks used in Iranian EFL classrooms are in two categories: locally-developed materials and internationally-developed materials. The content of these materials hardly support second culture acquisition in terms of conceptual skills (Dahmardeh 2009; Talebinezhad & Mahmoudzadeh 2011). The examples of locally-developed materials are coursebooks which are taught in middle schools and secondary schools. These coursebooks have also been developed at the post-secondary level where university students develop English language proficiency for reading their field textbooks in English or gain the ability to read research papers, attend conferences and the like. Section 2.7 introduces examples of internationally-developed coursebooks. These are normally taught in private language institutes. ESL schools and language institutes claim that they can assist language learners in achieving their desired language proficiency level, but studies indicate that they manifestly fail to do so (Dahmardeh 2009; Hashemian & Talebinezhad 2007; Talebinezhad & Mahmoudzadeh 2011).

5.3. Authentic based materials and metaphorical competence in classroom SLA

The main focus of this study has been to find out how metaphorical competence and conceptual fluency can be improved. To that end, a pre-test, post-test, and delayed post-test design was used to evaluate the influence of the two treatments on metaphorical competence development.

For measuring the effect of each teaching approach on conceptual skill development, the practicality of the treatments needed to be determined. Language proficiency evaluation was applied in parallel with conceptual skill evaluation. This indicated the effect of each treatment on the development of language proficiency and the basic language skills separately and comparatively. The research did not require assessing language proficiency at the delayed post-test stage. In other words, language proficiency was measured at two levels, pre-test and post-test, because the study only needed to know the effect range of each treatment's approach on participants' language proficiency. The major evaluation was intended to be on conceptual development. Language proficiency assessment was a secondary requirement at the pre-test and post-test stage, not at the delayed post-test stage. The language proficiency results obtained at the post-test stage meant that a delayed post-test was not required for language proficiency evaluation.

The delayed post-test was designed to measure metaphorical competence development in case there was a significant difference between the pre-test and the post-test. Before reviewing and discussing the need for a delayed post-test, the research questions raised in chapter four for statistical analysis is answered for the results in the pre-test and post-test in both the control and the experimental groups.

Research questions

- Do the scores on written and oral discourse metaphor density differ between the pre-test and the post-test (main effect) and between the control group and the experimental group (main effect)?
- Is there an interaction between tests depending upon whether participants are in the control group or the experimental group?

The analysis shows that the scores on written and oral discourse metaphor density differed between the pre-test and the post-test. Another main effect indicated that the scores in the control group and the experimental group were significantly different. In Chapter 4, tests of between-subjects effect for both written and oral discourse metaphor density proved an interaction between tests and between groups. Figures 5.6 and 5.7 show the means of the written and oral discourse metaphor density for both control and experimental groups.

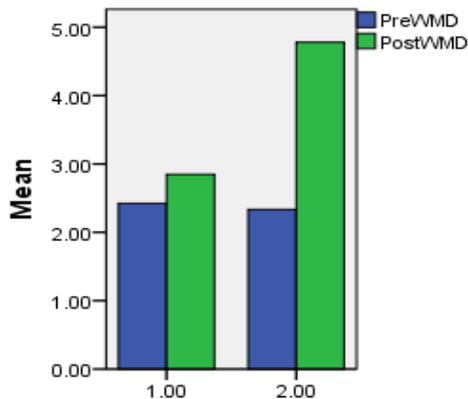


Figure 5.6. Written discourse metaphor density

1 = Control group; 2 = Experimental group

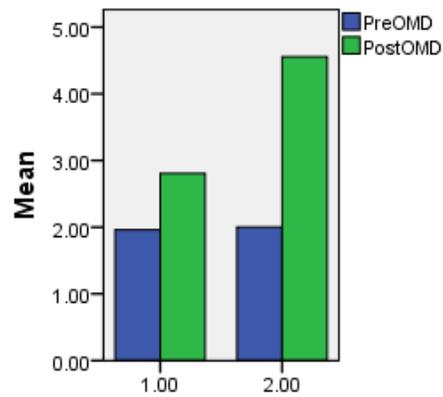


Figure 5.7. Oral discourse metaphor density

1 = Control group; 2 = Experimental group

The bar graphs in Figures 5.6 and 5.7 illustrate that the means in the experimental group almost doubled from pre-test to post-test in written and oral discourse metaphor density while the control group shows little change. This means that the authentic-based material treatment gave significantly better results for metaphorical competence in written and oral discourse products from the experimental group.

The next question for the study was whether the positive effect of the authentically-based approach could be counted as a long term effect or would participants who did well fall back to a lower level of conceptual fluency at the post-test stage. This necessitated the delayed post-test only for the experimental group.

Four months after the post-test, a delayed post-test was given to the participants in the experimental group. The results were different for the written and oral discourse metaphorical density. A pairwise comparison test showed a significant difference between both pre-test and post-test as well as between pre-test and delayed post-test for written discourse metaphor density. The same test indicated a significant difference only between pre-test and post-test for oral discourse metaphor density and not between the pre-test and the delayed post-test. The result proved that for written text metaphor density, the effect of the authentically-based material approach in the experimental group had a long term effect.

Figures 5.8 and 5.9 illustrate written and oral discourse metaphor density at pre/post and delayed post-test stages, respectively.

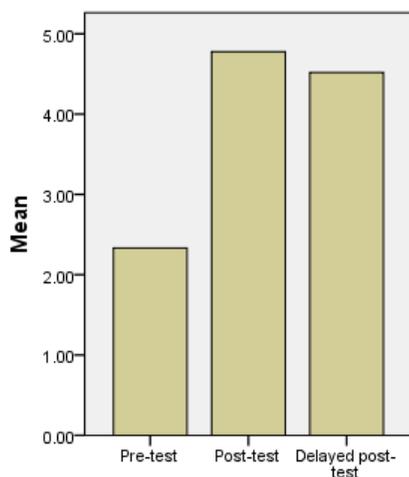


Figure 5.8. Written discourse metaphor density at pre/post and delayed post-test (left bar chart)

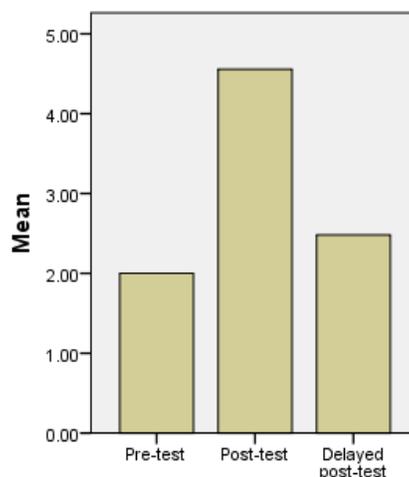


Figure 5.9. Oral discourse metaphor density at pre/post and delayed post-test (right bar chart)

According to Figures 5.8 and 5.9, the mean for written discourse metaphor density was 2.3 at pre-test and rose to 4.7 at post-test level. It had a very slight decline and reached 4.5 at the delayed post-test. For the oral discourse metaphor density the mean was 2.0 at pre-test stage and rose to 4.5 at post-test stage. Then, it fell down below 3 at delayed post-test level. Although it did not decline to the pre-test level at the delayed post-test, the mean did not show a significant difference between pre-test and delayed post-test.

Intensified exposure in the experimental group was achieved through maximizing learner contact with the sources carrying the cultural load of the area under investigation, i.e., 'Life on Campus'. The participants read authentic passages which were far longer in comparison with those used by the control group. This gave them a more extensive contact with the language sources. They had the chance for real conversations with native speakers in order to exchange ideas. In many cases L1 thought and L2 thought collided. This sometimes led to confusion for both online teacher and L2 learner, but the confusion was removed by a longer conversation between the two sides. The online class was not just a chat. It was a planned series of lessons

practicing focused language. It was not just speaking practice but an active listening drill as well. The learners had to be at an acceptable threshold of input and output to make the idea exchange possible with their online teachers. The limited number of students in an online class increased the amount of contact. The final point is that the online class was apparently practicing speaking/listening in the target language while, in fact, it went beyond that. It was a real challenge of communication which included all language skills for continuing the interaction.

Authentic reading passages were used in an effective way in experimental classes. In addition, students received online classes and watched authentic videos on parts of each topic. They also did exercises on all they were taught. The classroom teacher reviewed all that, and students had the further opportunity to troubleshoot. For each topic or lesson, the students in the experimental class took part in a session for completing exercises, practicing what they had learned on that particular topic and troubleshooting. This session was given after they had done all their online class, video class and home assignment work on that topic (Appendix Q). Finally, students did regular writing tasks on each topic and received feedback on these.

A close look at the stages of language learning in the experimental group indicates that every task required that the learners use what they learned in previous stages. For example, first, they did a pre-class activity (such as a reading assignment or video viewing on YouTube). Then they received the online class. In this class, learners could use the knowledge they had gained from their preparation assignment. In the discussion and troubleshooting class, they used all the knowledge they had acquired through the previous stages to finalize their work on the topic with which they were engaged. To elaborate this example, if the topic was 'Library Services', the students had the following preparation assignment before getting to class.

Reading texts (a total of six pages) :

- Undergrad and grad service
- Library research guide
- Interlibrary and loan request
- Reserves collection

Searching 'How to use library SFU' on YouTube:

- It gave us enough video sections on the topic. The teacher selected the ones s/he preferred and sent the link to the students for the preview.

Students joined the online class and watched the relevant videos on 'Library Services'. The final class on this topic was the discussion, exercise, and troubleshooting session during which students discussed questions based on the notes they had taken at different stages of their progress on the topic 'Library Services'. Finally, they did the writing assignment based on all their learning and which was marked by the teachers. As we see, each section of the lesson was a complementary stage for the previous one.

The control group learners were deprived of the same exposure though the same effort and time were spent in teaching them. According to the post-study questionnaire, participants in the experimental group believed that with authentically-based classroom materials they needed to put in less effort to access what they expected to learn and did so in a more engaging atmosphere.

The study showed that the exposure to authentic materials in the classroom can lead to an improvement in metaphorical competence in written and oral discourse. The study presented this result at the post-test stage while the result was modified at the delayed post-test phase of the research. The participants in the experimental group demonstrated the development of metaphorical skill in written discourse even four months after the course was over by their scores in the delayed post-test. The result was different for oral discourse metaphor competence. These scores declined in the delayed post-test but they were still higher than the scores of pre-test stage. It is beyond the scope of this study to present a precise explanation for this difference in conceptual development between the written and oral modes. Possible reasons are given in the next section which compares speaking and writing competencies based on my findings and relevant previous studies.

5.3.1. *Speaking and writing skills*

As stated, the result for metaphor density was different for writing and oral tests at the delayed post-test stage. Writing and speaking are both productive skills, but the product in each is obviously different. The participants probably had more time for

processing and applying the required segments from their memory in the writing phase while in speaking a faster pace is required. Further studies should help in discovering how to assist learners to internalize L2 metaphorical skills, particularly in speaking.

As writing in one's first language and writing in a second language have similar superficial elements, many may be led to the conclusion that writing in one's native language and writing in an L2 involve identical processes. However, L2 writing experts have challenged this assumption, claiming that these two processes are indeed very different (Silva 1993). Both L1 and L2 acquisition research have indicated that speaking and writing are related activities at the surface level. Also, they have similar underlying processes. However, from a diachronic perspective, these two may not develop similarly (Silva 1993).

Hubert (2008) sought to analyze the relationship that exists between the development of second language writing and speaking. The most relevant question of his research for the current study was whether the learners who use certain grammatical forms in their writing are able to reproduce those same forms accurately in their speech. He found that L2 learners' produced writing discourse that had a higher grammatical proficiency level in comparison with the corresponding L2 learners' spoken discourse.

His result showed a weak correlation between speaking and writing. Also, writing was the modality with more newly-presented grammatical forms.

Writing may allow different access to the interlanguage than speaking, allowing L2 learners to expand their target language grammar and lexicon at a faster pace than speech alone. In regard to ultimate target language attainment, achievement varies widely between learners of different inherent ability, social adeptness, and opportunity of being exposed to the target language. Almost all such research has been carried out with EFL learners, and according to long experience by EFL writing teachers and researchers, there appears at this time to be no general, sweeping conclusion available as to the strength of correlation between speaking and writing ability among EFL writers: this is instead highly variable (Hubert 2008: 8).

Hubert's findings on the relationship between L2 learners' written and oral discourse were not about conceptual skill development, but rather grammatical development. They showed what this study shows in terms of conceptual skills and

metaphorical competence. This study indicated that L2 learners could develop a more consistent and long-term improvement in conceptual skills and metaphorical competence in written discourse than in oral discourse.

5.4. Research questions and the results

So far, specific discussion on each of the tests given to participants has been presented. In addition, the way has been paved to turn to the three research questions of the study and answer each according to the findings of the study.

1. To what degree is conceptual fluency and metaphorical competence be affected by authentic materials and CALL-mediated instruction?

One main reason for doing this study was to expose the shortcomings of EFL classrooms in training second/foreign language learners in countries like Iran. As discussed earlier (e.g., Chapter 2), previous studies have shown that EFL students have succeeded in achieving a degree of linguistic and communicative competence. This leads to reasonable verbal fluency in English. On the other hand, conceptual fluency has been the weakness of even the good students in such EFL classrooms. This is hypothesized to be due to lack of attention to metaphorical competence development in EFL classrooms which are based on standard coursebooks. Danesi (1992) refers to this as 'neglected competence' in the title of his study.

Other studies have shown that it is vital to develop metaphorical competence in classroom SLA (Andreou & Galantomos 2009; Danesi 2008; Hashemian & Talebinezhad 2007; Lantolf & Poehner 2008; Lantolf & Thorne 2006). The question has been how to manage it. The present study was designed to apply authentic materials as the source of English language learning through the mediation of CALL techniques. The tool of measurement was metaphor.

The null hypothesis regarding the first research question stating that authentically-based material exposure in the EFL classroom has no effect on conceptual fluency and metaphorical competence was rejected. The results proved that exposure to authentic material through CALL techniques could positively affect the development of metaphorical competence. To analyze the degree of metaphorical competence

development, metaphorical density improvement was reviewed. In Section 3.8.1, it was demonstrated that a native speaker produced at least four metaphors and at most ten in written discourse and five and eleven, respectively, in oral discourse in a 250-word text on the topic 'Life on Campus' where an academic style of discourse was called for. The participants in the present research, however, had a metaphor density mean far below the minimum number of an English native speaker at the pre-test stage (see Figure 5.10). This doubled (less than 5), and reached the minimum metaphorical density of a native speaker at the post-test stage with the experimental group. This shows that the participants could succeed in developing metaphorical competence; not as successfully as a native speaker of English, perhaps, but still to an impressive degree. Further studies on authenticity of materials are required to assist L2 learners' achieve a better record of conceptual skills and metaphorical competence development in classroom SLA.

The background theoretical framework for the research can explain why this result was expected from the use of authentic material in the second language classroom. Sociocultural theory bases human mental functioning on a mediation process. Language use is one of the means of mediation. Developmental processes are formed through involvement in settings which are formed culturally, linguistically, and historically such as family/friends' interactions, school, and the workplace. Sociocultural theory states that the most significant forms of cognitive activity in humans develop through such social and material interactions with the environment (Lantolf & Thorne 2006).

Authentic material and the intended exposure of participants was a channel through which interaction with more significant sources could be provided. On the other hand, coursebook materials seem such a poor provider of social and material interaction with the real environment that only a low degree of cognitive activity and development can be expected. The pedagogy is not criticized here, but rather the poverty of source material presented to the learners. The materials seem not to provide the expected real sources to initiate and sustain interaction. How can one expect learners to develop conceptual skills out of such a poor source? The response based on this theoretical framework is that it is likely impossible to expect second language development in a

coursebook-based classroom setting because the required ingredients for the process of development hardly exist in such a setting.

2. By what means do authentic materials and CALL-mediated instruction impact learner outcomes with respect to conceptual fluency and metaphorical competence, i.e., is one of the four basic skills privileged over the others?

The study measured conceptual fluency and metaphorical development by written discourse metaphorical density and oral discourse metaphorical density. According to Lantolf and Thorne (2006), spoken and written language are the two predominant means by which humans are able to voluntarily control and organize (i.e., mediate) mental activity and use it in managing activities in the material world. Mediation is defined as the process through which humans deploy culturally constructed concepts and activities to regulate the world and social and mental activities. Language activity, speaking and writing, is the primary, though not exclusive, mediational means humans use for thinking. According to Lantolf and Thorne (2006), language regulates thinking. Cognitive linguists and cognitive anthropologists agree that conceptual meaning is a central feature of human thinking. In this respect, metaphor is taken as the most central focus of everyday thinking and linguistic activity (Lantolf 1999; Lantolf & Thorne 2006).

Speaking and writing, and the discourses produced through these channels by the participants, were used to determine and evaluate the effect of experimental treatments on metaphorical development. As discussed earlier, the study showed that participants could develop metaphorical competence in both written and oral discourse at the post-test stage, but the delayed post-test showed that only the development of written discourse was well-internalized.

The result of language skills evaluation also indicated that productive skills development was different from that of receptive skills. It is crucial to know that the TOEFL iBT claims to evaluate academic language proficiency and not conceptual development. However, it seems impossible to absolutely detach the conceptual part of a language and only test academic skills with that same language. Though no significant main effect for group was demonstrated in the language skills tested, and it cannot be claimed that speaking and writing skills (productive skills) are shown to have a higher degree of improvement in the experimental group in comparison with listening and

reading skills (receptive skills), the experimental group's higher scores at the post-test stage in speaking and writing and the indication that a main effect was shown by a significant interaction between test level and group for productive skills show a tentative positive development of speaking and writing in the experimental group.

3. Can we predict whether the findings of this study are generalizable to other learners in different settings?

It is not possible to answer this question with any degree of confidence. However, the results of this study and the principles of sociocultural theory can lead us to a tentative "yes". It is likely possible to develop a more desirable level of conceptual fluency and metaphorical competence if a language learning setting or methodology can provide learners with a richer interactive exposure to authentic sources of the target language. In other words, the cultural development of humans is closely related to the sociocultural domains. Higher forms of human mental functioning are mediated by artifacts which are structured culturally (Lantolf & Thorne 2006). The interaction of cultural activities, cultural artifacts, and cultural concepts are complex. Thus, any setting creating the required potential for social and material interaction with authentic environmental sources of the language is expected to influence cognitive activity and higher levels of conceptual development in the target language.

In Chapter 2, a detailed report on relevant investigations was presented. To create a wider space beyond my findings in this study and learn about the status of my investigation, it is worthwhile, at this stage, to briefly point out the recent findings of only a few among many related studies. Andreou and Galantomos (2009) did research on conceptual competence as a component of second language fluency. In their study, it was noted that abstract concepts are introduced by metaphors and other types of figurative language. In the experiment, Modern Greek learners were encouraged to express their viewpoints on the concept of happiness. The main finding of their study showed that concentration on conceptual instruction assisted L2 learning.

In a study by Picken (2005), Japanese EFL students were introduced to the substantial challenge of making sense of literary texts written in a foreign language. Picken focused on metaphor in literature and on whether awareness-raising work related to conceptual metaphors could help the students make sense of the linguistic metaphors

in the texts used in the experiment. The study provided evidence to support the claim that conceptual metaphor awareness-raising assists students with understanding reading materials. Researchers have shown that the results of a considerable number of investigations lead to the conclusion that raising learners' consciousness about conceptual metaphors in the L2 results in improved performance in the processing of metaphors (Cieslika & Singleton 2004).

On the topic of metaphor teachability, the results of my study parallels those of Danesi (1999) and Hwang (2008) who state that if the proper materials and pedagogical practices are utilized, conceptual knowledge is effectively teachable in the second language classroom.

Danesi (1992; 1995; 2003) and Johnson and Rosano (1993) contend that metaphorical language cannot afford to be ignored by L2 curricula anymore. As Hashemian and Talebinezhad (2007) stated, conceptual fluency and metaphorical competence have been the focus of a number of L2 researchers. Their push is to direct L2 learners towards a more functional communicative competence. Hashemian and Talebinezhad (2007) scrutinized the development of conceptual skills development in Persian students of English. The findings showed that it is possible to develop conceptual fluency and metaphorical competence.

5.5. Practical focus and research outcomes

This study addresses, among other things, two vexed areas of L2 learning. One relates to who is a qualified English language instructor and how ESL/EFL teaching can be improved. The second area is language proficiency assessment. Proficiency assessment impacts high-stake issues such as immigration, university and college admissions, and employment. It is essential that stakeholders have reliable data on which to make life-altering decisions.

5.5.1. *ESL/EFL instructor training courses*

EFL classroom teachers play a crucial in developing their students' conceptual skills. One major question raised by the outcomes of this study is the characteristics and

specifications of a “qualified” EFL/ESL teacher. These characteristics need to be viewed from the conceptual skills learning and teaching perspectives. TESL/TEFL qualifications related to teaching the conventional four skills may not address the means of developing conceptual skills in EFL classrooms.

Thus Iranian EFL/ESL teachers trained in approaches which do not value conceptual learning and metaphorical competence development cannot realistically expect their learners to achieve meaningful English language competency. Teacher training courses also need to acknowledge this fact through revised accreditation measures that insure pre-service teachers are themselves conceptually fluent.

Use of the right kinds of course materials will also aid learners in building metaphorical competence and conceptual learning. Most of the materials used in Iranian EFL classrooms do not do this. An example of materials that do are the authentic sources I applied to the experimental class in my study. Rather than slavishly following the EFL/ESL student books churned out by international publishers aimed at the non-existent generic classroom, materials developers (and teachers) need to raise the bar.

I note in closing this section that non-native speakers of the target language can certainly be qualified teachers in EFL classrooms. Metaphorical competence and conceptual fluency are not the exclusive domain of native speaking teachers. But all pre-service teachers must be required to demonstrate these attributes.

5.5.2. *English language assessment*

I have listened to many applicants who complain about standardized tests by which they are evaluated for educational or employment purposes. They claim that they have a good level of English language proficiency, but they fail to get the score they are required to have for certain applications. Of course students are sometimes admitted to universities but then have a hard time managing their courses because of their difficulty interacting in English. There are many immigrants who also score well on standardized tests, but have serious difficulties with day-to-day English communicative needs.

The foregoing argues for new proficiency assessment tools. It is essential to measure applicants' knowledge of English according to the future needs they have. If the

applicant who takes the exam is required to use English at university or live as an immigrant in a country where English is the most common language, we need to measure real language proficiency and not just academic English skills. In other words, I suggest that we need to establish an assessment system through which we can evaluate and measure conceptual skills in addition to academic language proficiency.

How this can best be accomplished will require the consideration of two concerns. First, it should be possible to devise graduated rating scales for metaphorical competence and conceptual fluency. This more precise categorization will help to place learners in appropriate classes congruent with their language learning goals and prospective usage. Second, standardized tests will need to include more fine-grained ways of scoring for these categories.

5.6. Limitations

In my study, I did my best to follow various stages of research for finding the answers to the research questions. In this connection, there were limitations and difficulties (see Appendix D). Among them, probably the biggest limitation of the present study was the rudimentary use of technology. Financial constraints prevented a more elaborate framework in this regard as did infrastructure limitations, e.g., unpredictable internet availability.

This study could have provided more objective results had it employed a more dynamic assessment system, rather than a pre-test, post-test, and delayed post-test design. Lantolf and Poehner (2008) discuss Dynamic Assessment approaches and quote Feuerstein, Rand and Rynders (1988) to the effect that "DA (Dynamic Assessment) approaches share a commitment to uncovering abilities that typically remain hidden during assessment by requiring the assessor to abandon his/her traditional role as a dispassionate observer in favor of collaborating with learners to actively intervene in development" (16). Dynamic Assessment is "an assessment that enables learners to display their abilities but it does not go through teaching interaction that is attuned to learners' ever-changing (i.e., dynamic) level of development" (Lantolf & Poehner 2008: 16) (see Poehner 2008). In other words, by using dynamic assessment, I

could have observed the gradual changes in the participants' proficiency over the course of the experiment. Also, shortcomings could have been controlled and perhaps better managed. That is, a step-by-step assessment could have allowed better control over each individual L2 learner in the class and assisted in better mediation in case any students developed barriers to their language development.

Another limitation of the study was the lack of control over students' performance in homework assignments. Of course, this lack of control affected both the control and the experimental groups. If that could have been controlled, as is normally done in many regular courses through the marking of assignments, then improved student preparation may have led to further proficiency enhancements.

5.7. Further investigation

In addition to this investigation, there have been many studies in the area of metaphorical competence and conceptual fluency development, but there is room to investigate more. Studies of EFL classrooms with learners of different L1 backgrounds and metaphorical competence measurement on other skills (e.g., receptive skills) are examples for further investigation. Further studies should help in discovering how to assist learners to internalize L2 metaphorical skills, particularly in speaking. We need to learn how we can extend the learnability of metaphorical skills among EFL classroom learners and what other methods or approaches can lead to a better development of metaphorical competence. We also need to learn more about the third research question of this study, that is, conceptual development in other settings of language learning (e.g., self-learning programs, ESL classes in English speaking regions). Gestural metaphor was not investigated in my study as it was a controlled variable. Yet, it is an open question whether language learners are able to acquire gestural metaphor skills in an L2.

More studies are required to learn about the long-term effects of instruction in conceptual skills and metaphor. Even the delayed post-test stage of the present study was not sufficiently "long term". Such studies, of course, will face the same risk from confounding variables that are so difficult to control as the time frame lengthens. For

example, it is impossible factor in every piece of second language input that learners receive outside the classroom. Affective variables such as motivation are not static either and may have unknowable effects on the development of the skills at issue in this thesis.

5.8. Conclusion

This study investigated the development of conceptual skills and metaphorical competence in Iranian EFL classrooms through the mediation of authentically-based sources delivered up via CALL and other media. The results of the study showed that it is feasible to assist second language learners with their L2 conceptual skills in a classroom environment. Second language learners showed that their written and oral discourses had a heightened level of conceptual fluency and metaphorical structure after being exposed to and working with authentically-based materials. Delayed post-tests revealed that oral and written discourse improvements persisted although oral discourse scores fell back to a limited extent. In general, a less marked discourse product with a higher metaphorical density demonstrated the teachability of metaphor in the EFL classroom based on an immediate assessment after instruction. Finally, the results indicated that conceptual fluency and metaphorical competence are two related phenomena and that the development of one influences the other.

Although the participants in my study were able to demonstrate comprehension of conceptual and metaphorical linguistic input in English, this finding does not extend to production. By their conceptual learning, these participants achieved primary skill development that would aid them in reducing misunderstandings in interactions with native speakers of English and other authentic sources of English. I agree with Lantolf and Thorne (2006) that introducing this ability is key to developing self-mediation. This will allow learners to acquire a good understanding of language and "regulate their thinking at least to some extent" (p. 125).

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Appendices

Appendix A.

Cultural Knowledge questionnaire

1. How long have you been an ESL learner?

2. What do you know about the following? Explain each in 40 words.

Library and its services

Applying for grad studies

Gym on campus

Career services on campus

Residence on campus/off campus

Financial aids/bursary

Teaching assistantship/Research assistantship

Co-op work/ Work study

Letter of intent and proposal

Professors and their teaching methods

Ethics approval

Exchange student

3. Have you learned anything about the above headings in English in a different environment or situation than your language classroom in Iran? Please explain.

Appendix B.

Background questionnaire (participant's English language learning background)

Please answer the questions in detail.

At what age did you start learning English language?

Where did you start to learn English language?

If you have learned English language in a setting different from classroom environment, please specify in detail.

Has any family members, relatives or friends assisted you with English language learning? Is he a native speaker or has he learned English in a setting different from classroom? How?

Have you traveled to an English speaking country? If yes, give details.

Have you watched any movies or read any novels on students' life? What have you learned about this topic in English and how did you learn it?

Are you interested in cultural learning of English language? As you are a student, would you like to know more about the life on university campus in English?

Appendix C.

Consent Form

Study No [2011s0152]

Investigator:

Mehran Norafkan, PhD student at the Linguistics Department of Simon Fraser University

Title of Project: Learnability of cultural models through exposure to authentic material: Focus on metaphorical competence and conceptual fluency The main goal of the study is to investigate the teaching construct through which second/foreign language learners can be assisted to promote their conceptual fluency in the target language.

There are two types of questionnaires and two tests for you to fill out which are on cultural aspects of 'Students' Life on Campus'. The questionnaires are pre-test questionnaires and post-study questionnaires. The tests are IBT (internet-based TOEFL) and a composition writing test on a topic relevant to 'Students' Life on Campus'. It takes about four hours and a half to receive the data and do the questionnaires. This will happen in your classroom. Zabansara Language School has granted permission to the researcher to run the research performance for the data collection. This permission has been obtained formally. You are supposed to answer the questions to the best of your knowledge, and no deception is utilized in data collection.

Benefits of the study include better understanding of language phenomenon and adding more data to the domain of language learning science as well as finding more about cross-cultural learning including the promotion of metaphorical competence.

You get the benefit of sharing in this research work to provide the results for the improvement of language learning in classroom SLA.

Any information that is obtained during this study will be kept confidential to the full extent permitted by law. Your real name will not be reported in any resulting publications. In other words, your identity and information relevant to your identity will be all recorded and kept confidentially by the researcher. You can withdraw at any time without prejudice and without any effect on your future studies and activities in your classes. If at any point during or after the performance you decide that you wish to withdraw the participation, the data gained will be erased. If you are recontacted, you can approve or refuse to cooperate with the research team and the reason of this re-contacting will be given. The data will be kept securely in a safe condition and in a locked cabinet for two years. The researcher only can reach them and after that, since the data is in paper form, it will be destroyed and burnt.

The University and those conducting this project subscribe to the ethical conduct of research and to the protection at all times of interests, comfort, and safety of participants. This research is conducted under permission of the Simon Fraser University Ethics Board. The chief concern of the Board is the health, safety and psychological well-being of research participants. If I wish to obtain information about my

rights as a participant in research, or about the responsibilities of researchers, or if I have any questions, concerns or complaints about the manner in which I am treated in this study, I contact the director, Office of Research Ethics by email at [REDACTED], by phone at 778-782-6593 or regular mail at

Office of Research Ethics
Simon Fraser University
8888 University Drive
Multi-Tenant Facility
Burnaby, B.C. V5A 1S6.

Or you can also contact my senior supervisor Dr. Sosa at [REDACTED], by phone at 778-782-5970, or regular mail at

Department of Linguistics
8888 University Drive
Simon Fraser University
Burnaby, BC V5A 1S6 Canada
Office: RCB, 8205

Having been asked to participate in the research study named above, I certify that I understand the procedure to be used in this study and the fact that there is no risks to me in taking part in the study as described. Besides, my participation may lead to cultural learning in English language.

I can obtain copies of the results of this study, upon its completion by contacting the investigator at

[REDACTED]

Full Name of participant:

Participant's Contact information:

Participant's signature:

Date (MM/DD/YYYY)

Appendix D.

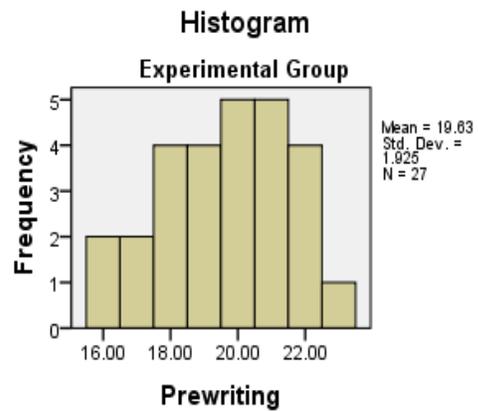
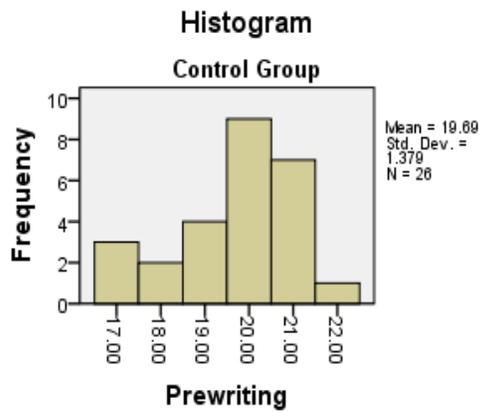
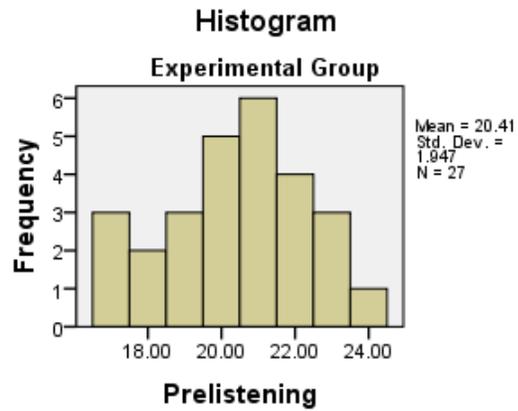
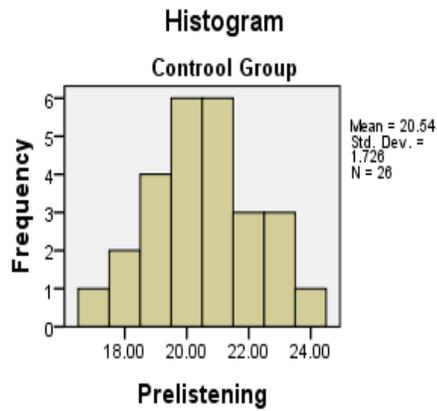
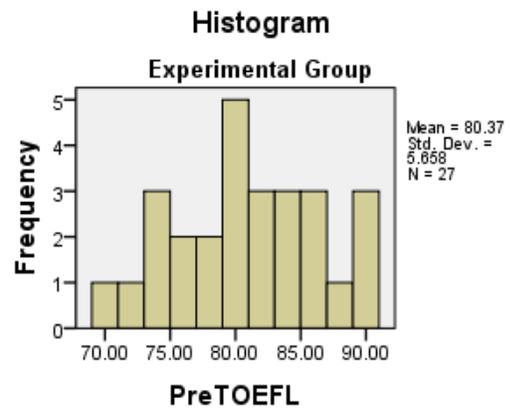
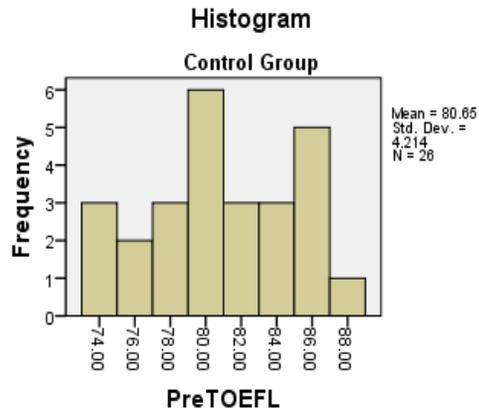
Research and Challenges

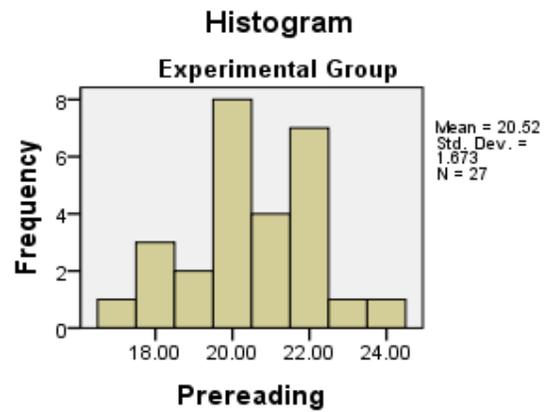
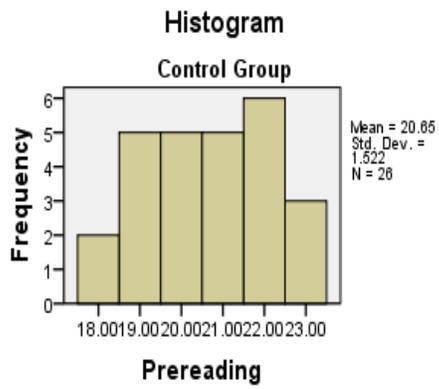
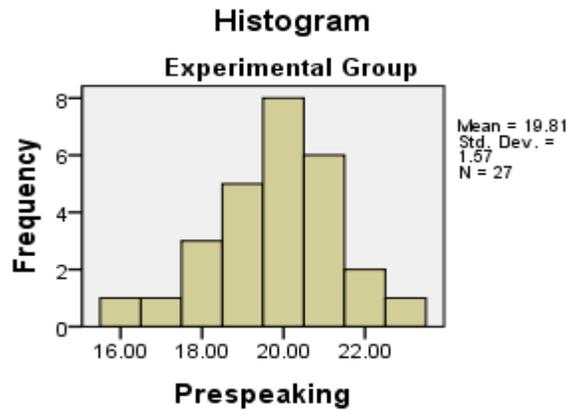
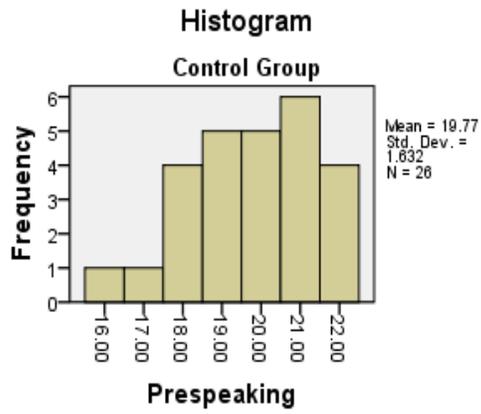
Apart from the challenges and difficulties that researchers may have while dealing with participants in a study, the current research required serious planning, effort, and management for the execution of experiments. It is worthy to just refer to some. This might highlight the degree of hard work which has been put into the study. Besides, it might be helpful for further investigation and what a prospective researcher may need to consider in their planning.

- Recruiting a big number of participants for attending a course everyday almost the whole summer of 2011
- Provision of the place to hold the classes; required space for the setting of classes
- Provision of the required equipment such as high speed internet access, computers and other technical devices
- Managing an intercontinental research; teachers in Canada and students in Iran. Managing the attendance of these two groups punctually for the classes
- Taking care of unexpected interruptions such as Internet pauses
- Material development for the topics under investigation
- Financial management
- Performing three sections of giving tests to 53 participants (pre-test, post-test, and delayed post-test)
- Managing different time zones
- Traveling back and forth between Canada and Iran

Appendix E.

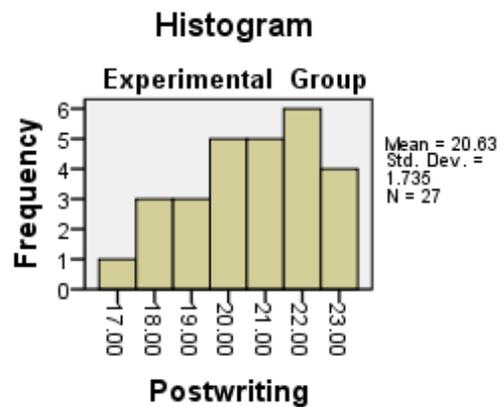
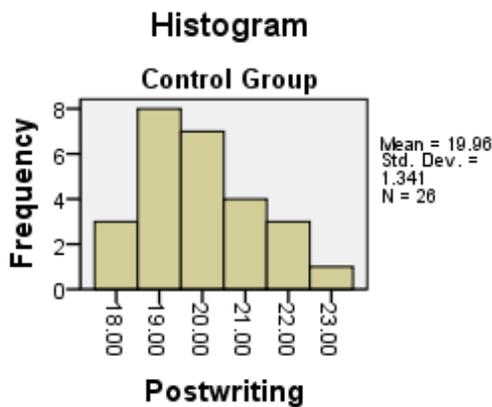
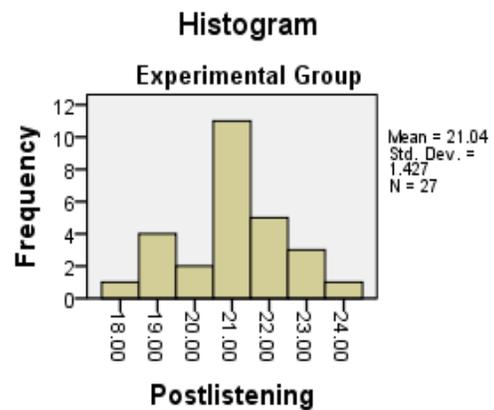
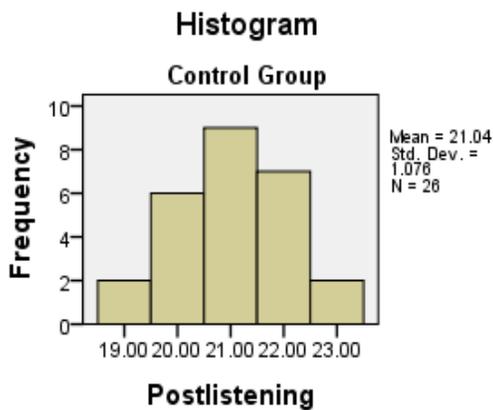
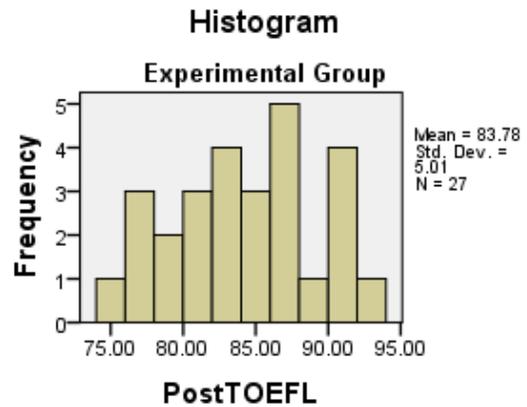
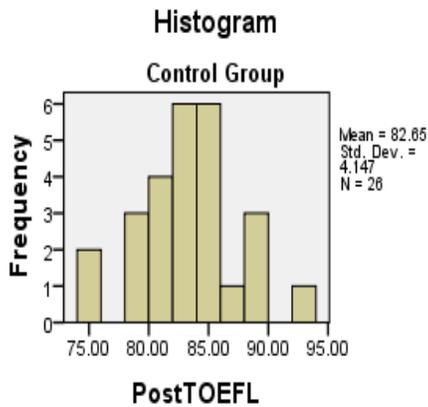
Pre-test histograms

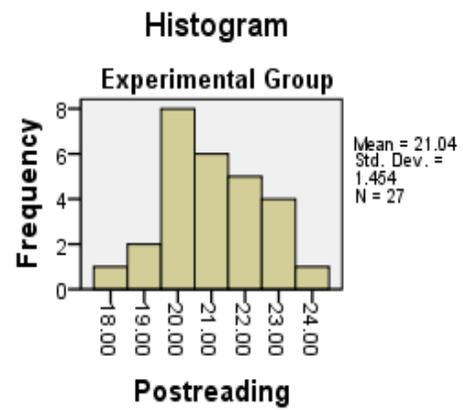
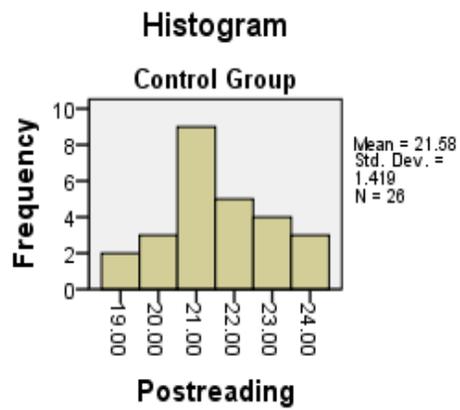
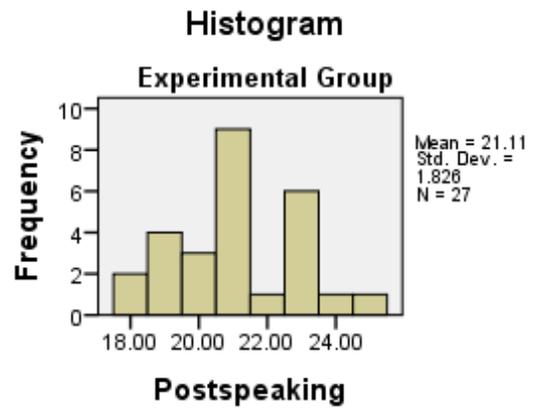
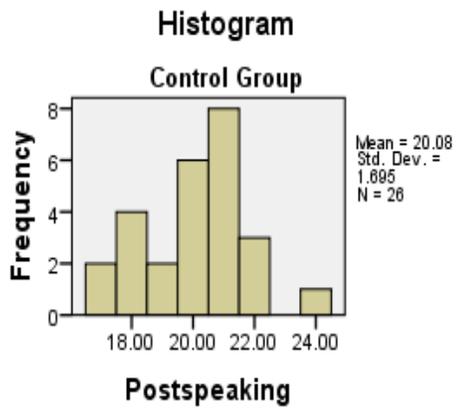




Appendix F.

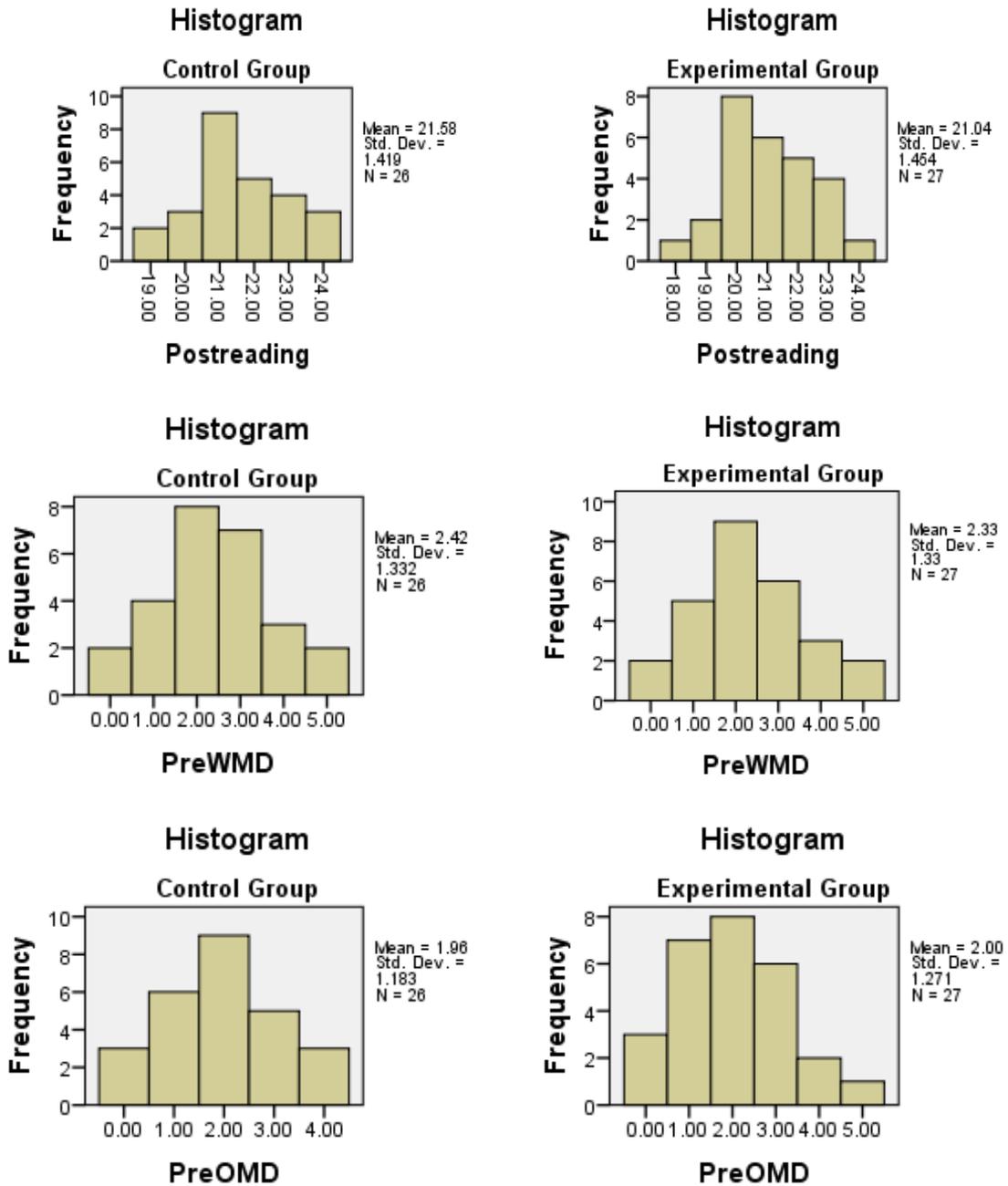
Post-test histograms





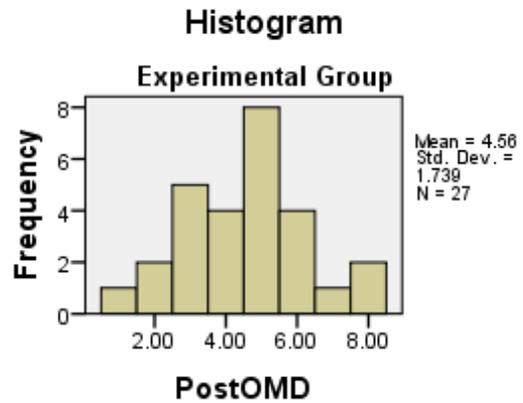
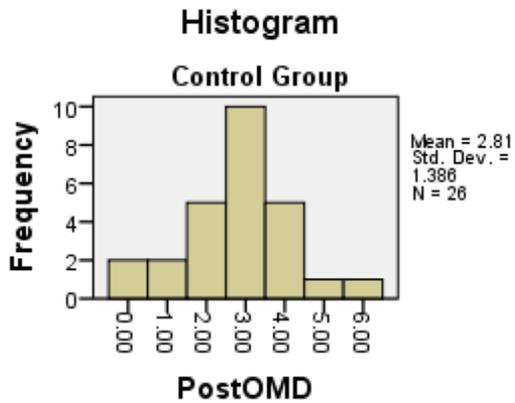
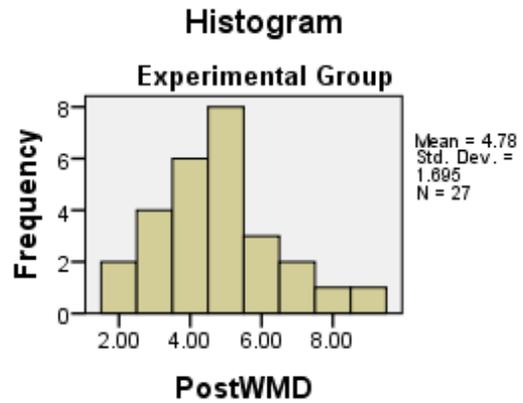
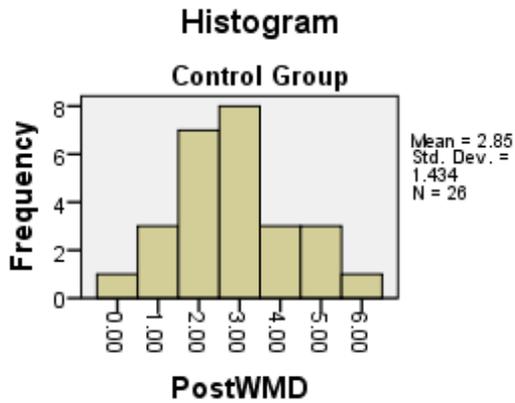
Appendix G.

Written and oral discourse metaphor density (WMD & OMD) pre-test histograms



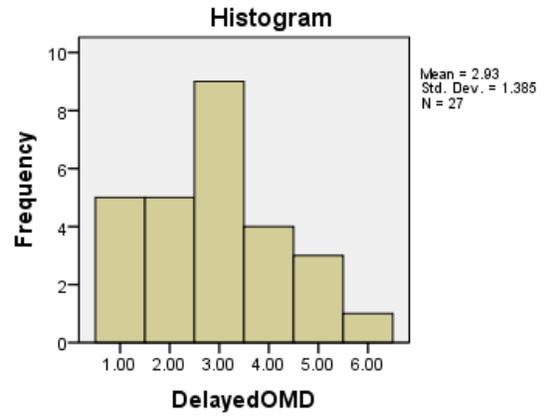
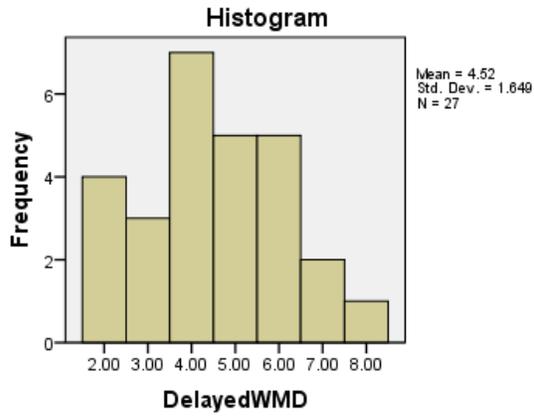
Appendix H.

Written and oral discourse metaphor density - delayed post-test histograms



Appendix I.

Written and oral discourse metaphor density (WMD & OMD) post-test histograms



Appendix J.

Tests of Normality

Shapiro-Wilk test shows us that there are not statistically significant differences from the normal distribution. All show that the significant values are more than 0.05, and therefore, the null hypothesis of a normal distribution is not rejected. This supports the claim that there is normal distribution of data.

Pre-tests

Tests	Group	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
Pre-TOEFL	Con.	.131	26	.200	.941	26	.140
	Exp.	.089	27	.200	.972	27	.655
Pre-listening	Con.	.125	26	.200*	.970	26	.627
	Exp.	.138	27	.200*	.954	27	.270
Pre-writing	Con.	.242	26	.000	.893	26	.011
	Exp.	.132	27	.200*	.955	27	.285
Pre-speaking	Con.	.159	26	.089	.938	26	.119
	Exp.	.177	27	.030	.960	27	.366
Pre-reading	Con.	.158	26	.094	.932	26	.086
	Exp.	.156	27	.090	.953	27	.251
Pre-WMD	Con.	.163	26	.073	.945	26	.175
	Exp.	.192	27	.012	.940	27	.120
Pre-OMD	Con.	.179	26	.031	.923	26	.052
	Exp.	.167	27	.052	.937	27	.100

Con., Control Group

Exp., Experimental Group

WMD, Written Discourse Metaphor Density

OMD, Oral Discourse Metaphor Density

Post-tests

Tests	Group	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
Post-TOEFL	Con.	.103	26	.200*	.973	26	.715
	Exp.	.120	27	.200*	.956	27	.295
Post-listening	Con.	.178	26	.033	.924	26	.055
	Exp.	.230	27	.001	.936	27	.098
Post-writing	Con.	.186	26	.021	.924	26	.057
	Exp.	.156	27	.093	.935	27	.089
Post-speaking	Con.	.174	26	.041	.939	26	.127
	Exp.	.191	27	.013	.944	27	.151
Post-reading	Con.	.196	26	.011	.934	26	.099
	Exp.	.153	27	.103	.950	27	.220
Post-WMD	Con.	.188	26	.019	.951	26	.241
	Exp.	.189	27	.015	.947	27	.179
Post-OMD	Con.	.196	26	.011	.934	26	.099
	Exp.	.170	27	.045	.952	27	.234

Con., Control Group

Exp., Experimental Group

WMD, Written Discourse Metaphor Density

OMD, Oral Discourse Metaphor Density

Delayed post-tests

Tests	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Delayed Post-test WMD	.142	27	.174	.948	27	.193
Delayed Post-test OMD	.182	27	.022	.927	27	.057

Appendix K.

Test of homogeneity of variance

(TOEFL and language skills pre-tests and post-tests)

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Pre-TOEFL	Based on Mean	2.067	1	51	.157
	Based on Median	2.070	1	51	.156
	Based on Median and with adjusted df	2.070	1	48.004	.157
	Based on trimmed mean	2.074	1	51	.156
Pre-listening	Based on Mean	.449	1	51	.506
	Based on Median	.293	1	51	.591
	Based on Median and with adjusted df	.293	1	48.045	.591
	Based on trimmed mean	.448	1	51	.506
Pre-writing	Based on Mean	3.883	1	51	.054
	Based on Median	3.554	1	51	.065
	Based on Median and with adjusted df	3.554	1	49.692	.065
	Based on trimmed mean	3.915	1	51	.053
Pre-speaking	Based on Mean	.323	1	51	.572
	Based on Median	.325	1	51	.571
	Based on Median and with adjusted df	.325	1	50.579	.571
	Based on trimmed mean	.304	1	51	.584
Pre-reading	Based on Mean	.058	1	51	.811
	Based on Median	.054	1	51	.817
	Based on Median and with adjusted df	.054	1	48.384	.817
	Based on trimmed mean	.060	1	51	.807

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Post-TOEFL	Based on Mean	2.261	1	51	.139
	Based on Median	2.290	1	51	.136
	Based on Median and with adjusted df	2.290	1	50.793	.136
	Based on trimmed mean	2.267	1	51	.138
Post-listening	Based on Mean	.683	1	51	.413
	Based on Median	.657	1	51	.421
	Based on Median and with adjusted df	.657	1	45.505	.422
	Based on trimmed mean	.685	1	51	.412
Post-writing	Based on Mean	2.885	1	51	.095
	Based on Median	2.022	1	51	.161
	Based on Median and with adjusted df	2.022	1	48.341	.161
	Based on trimmed mean	2.681	1	51	.108
Post-speaking	Based on Mean	.099	1	51	.755
	Based on Median	.042	1	51	.839
	Based on Median and with adjusted df	.042	1	50.304	.839
	Based on trimmed mean	.082	1	51	.776
Post-reading	Based on Mean	.000	1	51	.993
	Based on Median	.016	1	51	.901
	Based on Median and with adjusted df	.016	1	49.451	.901
	Based on trimmed mean	.000	1	51	.994

Appendix L.

Test of homogeneity of variance

(written and oral discourse metaphor density pre/post-tests)

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
PreWMD	Based on Mean	.002	1	51	.965
	Based on Median	.023	1	51	.879
	Based on Median and with adjusted df	.023	1	50.999	.879
	Based on trimmed mean	.003	1	51	.955
PreOMD	Based on Mean	.096	1	51	.758
	Based on Median	.131	1	51	.719
	Based on Median and with adjusted df	.131	1	50.855	.719
	Based on trimmed mean	.128	1	51	.722
PostWMD	Based on Mean	.454	1	51	.504
	Based on Median	.408	1	51	.526
	Based on Median and with adjusted df	.408	1	49.286	.526
	Based on trimmed mean	.482	1	51	.490
PostOMD	Based on Mean	1.844	1	51	.180
	Based on Median	1.532	1	51	.222
	Based on Median and with adjusted df	1.532	1	49.704	.222
	Based on trimmed mean	1.835	1	51	.182

Appendix M.

Box's Test of equality of covariance matrices

Box's Test of equality of covariance matrices indicates that covariance matrices are the same between control group and the experimental group. We need the correlation between pre-test and post-test to be the same for the control and experimental groups. It tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups. It should be non-significant which in this case is non-significant.

TOEFL iBT

Box's M	2.806
F	.896
df1	3
df2	491898.091
Sig.	.442

Listening

Box's M	2.270
F	.724
df1	3
df2	491898.091
Sig.	.537

Reading

Box's M	.805
F	.257
df1	3
df2	491898.091
Sig.	.856

Speaking

Box's M	1.390
F	.444
df1	3
df2	491898.091
Sig.	.722

Writing

Box's M	3.883
F	1.239
df1	3
df2	491898.091
Sig.	.294

WMD

Box's M	2.589
F	.826
df1	3
df2	491898.091
Sig.	.479

OMD

Box's M	2.904
F	.927
df1	3
df2	491898.091
Sig.	.427

Appendix N.

Levene's test of equality of error variances

It tests the null hypothesis that the error variance of the dependent variable is equal across groups. It should be non-significant and in this case it is.

Listening

Tests	F	df1	df2	Sig.
Pre-listening	.449	1	51	.506
Post-listening	.683	1	51	.413

Reading

Tests	F	df1	df2	Sig.
Pre-reading	.058	1	51	.811
Post-reading	.000	1	51	.993

Writing

Tests	F	df1	df2	Sig.
Pre-writing	3.883	1	51	.054
Post-writing	2.885	1	51	.095

Speaking

Tests	F	df1	df2	Sig.
Pre-speaking	.323	1	51	.572
Post-speaking	.099	1	51	.755

WMD

Tests	F	df1	df2	Sig.
-------	---	-----	-----	------

Pre-WMD	.002	1	51	.965
Post-WMD	.454	1	51	.504

OMD

Tests	F	df1	df2	Sig.
Pre-OMD	.096	1	51	.758
Post-OMD	1.844	1	51	.180

Appendix O.

Mauchly's Test of Sphericity

Test shows that the Mauchly's Test of Sphericity is not significant. This means that the relevant data do not violate the sphericity assumption of the univariate approach to repeated measures analysis of variance.

Written text metaphor density

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^a		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Dimension WMD*	.973	.690	2	.708	.973	1.000	.500

Oral text metaphor density

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^a		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Dimension1 OMD	.881	3.166	2	.205	.894	.955	.500

Appendix P.

Research Photos



Photo1 Orientation Day 1

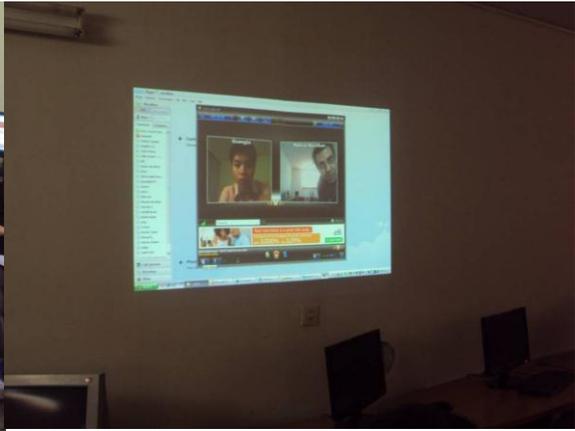


Photo 2 Orientation Day 2



Photo 3 Orientation day 2



Photo 4 Language Lab
(Introducing sample online sources)



Photo 5 Language Lab



Photo 6 Language Lab



Photo 7 Online class in ESL School



Photo 8 Control Group Class



Photo 9 Control Group Class



Photo 10 Online Teacher on ooVoo



Photo 11 Canada/Iran (Peggy is teaching)

Appendix Q.

Sample syllabus design

Unit plan

Today's Topic: Library and its Services

Day 0 :

Teacher's job: Teacher introduces topic, and gives students relevant texts from online :

A-SFU library website resources are examples given below.

<http://www.lib.sfu.ca/my-library/services-for-you> is the suggested source to the teacher.

Reading text will be prepared to be sent to the students:

- Undergrad and grad service
- Library research guide
- Interlibrary and loan request
- Reserves collection

The materials above are 6 pages for students to read.

B- Searching 'How to use library SFU' on YouTube:

It gives us enough nice video sections on the topic. The teacher selects the ones he prefers and sends the link to the students for the preview.

C- The materials given will be appropriate for the time students have for preparation. The above preview section seems fine. Further sources will be introduced for students who are faster or need more entertaining interaction.

<http://www.lib.sfu.ca/help/publication-types/online-images>

HW: Students read texts and they go through other assignments (listening or watching online sources on YouTube) for the discussion day (Day 2).

Day 1 :

Students get to class and all have previewed the materials sent.

For the first part of Day 1 class students meet with online teacher.

Online teachers will all discuss the topic based on the discussion plan (see appendix R for a sample discussion plan). Both students and online teachers have previewed the discussion plan for the relevant topic. This discussion plan is a one-page information of new words, discussion questions and notes that is similar for all groups. (For each topic there is a discussion plan made by researcher and the online teachers). The students

receive all discussion plans of 12 topics before the start of the classes.

While online teacher is managing the discussion, the students take notes from what they are learning. These notes are important to be added to their notes from reading assignment to have a stronger chance of discussion collaboration on Day 2 on the topic 'How to use library'.

For the second part of the day, the students watch the video (made by the researcher and the volunteers) which focuses the day's lesson 'using library and its services'. This video portrays many parts of what they have already read about. The teacher will answer the questions regarding the video (words, phrases, details on what the students may require to know).

HW: So far Students have read materials on the topic. They have also received input from YouTube assignment as well as researcher's video. They add their notes from online class to all these and get ready for their discussion and the questions teacher will raise on Day 2 .

Day 2 :

Teacher's job: Based on the points the students come up with, the teacher will select students at random to lead the discussion. The teacher raises questions and based on the responses received from each group she/he marks them.

Marking will be from 0-20 based on the feedback from students (system of grading in Iran is from 0-20).

The teacher will use some of the online sources introduced earlier. Everybody is supposed to share with the topic and the teacher facilitates this collaboration. The questions will lead the discussion the way it can reach maximum output from what the students have already covered. The teacher will make notes of conceptual errors students make. The teacher may correct the students on the spot or leave the note to be explained in more detail on Day 3.

HW: Writing assignment for Day 3- on the topic of using the library

Day 3 :

Teacher's job: Do exercises on conceptual errors that arise from the discussion.

The exercises will be produced based on the students' errors. Grading will be again from 0-20 for the interaction of students on doing the exercises .

If there are any notes left regarding the conceptual errors of the students, the teacher explains them to class.

Day 0 :

Submit essay.

Teacher's job: Introduce the new unit and evaluate the writing assignment for the coming class.

*Note: If the content designed for Day 3 is covered, it is possible to start teaching a new lesson.

Appendix R.

Online teachers' sample discussion plan

Lesson Plan - "The Gym"

This lesson uses the gym as a central theme of focus. We will look at gym related terminology and ideas.

It is recommended that you complete the follow before class-

Read through the passage slowly- take note of words and phrases you do not understand.

Read the definitions of the italicized phrases given at the end.

Read through the passage a second time trying to figure out the terms using their context and the definitions you have just read. If you wish to work further you can look up the definitions of the terms you do not understand. Your instructor will also be able to help with any questions during the lesson.

Write down ideas and prepare brief answers to the discussion questions.

Test your understanding by filling in the blanks using one of the italicized words.

The Gym

At almost any typical college or university in North America you will likely find a *gym*. The term itself "*gym*" can refer specifically to a *weight room*, or to a more general area that includes a basketball court, racquetball court, *stretching area*, *running track* etc. Going to the gym is an activity that has grown immensely in popularity over the last 50 years, participants now range from the elderly looking to improve their *day to day* functioning to average men and women wanting to look better and improve their health to serious athletes looking for a *competitive edge*. All of these people can derive many benefits from a well thought out, properly designed gym routine.

A gym routine should be specifically tailored depending on *the goal in mind*, the persons training experience, past injuries and a whole host of other factors. People looking to lose weight will likely perform more *cardio* and could use supersets to boost their *metabolic rate*. An elderly person looking to improve their *day to day* functioning will perform mobility drills, *stretching*, and lift lighter weights. An athlete such as a basketball, baseball or soccer player will lift heavier weights and perform *plyometrics* to improve their speed and explosiveness. All of these people will also need to *tailor* their diet to *suit* their particular goals.

Diet

An often undervalued and overlooked aspect of going to the gym is the role of diet in achieving the results you desire. A gym routine can be very well designed but without a corresponding proper diet the results seen will be minimal. The most important concept in diet is that of *caloric deficit* or, oppositely, *caloric surplus*. A *caloric deficit* is when a person consumes less calories than is required to maintain that particular person's body weight. A *caloric surplus* is when a person consumes more calories than required to maintain their body weight. With a *caloric deficit* the body must make up for the deficit by burning fat or muscle for fuel. In a *caloric surplus* the body will either store the surplus as fat or use it to build new muscle tissue. Depending on your goals, that is, whether you wish to lose fat or gain muscle, it is important to know whether you are in a surplus or deficit. Another vitally important diet strategy is the idea of "*pre-workout*" and "*post-workout*" nutrition. It has been shown that the body has a *window of opportunity* following a weight training session where it can make use of nutrients in a way that it cannot do at any other time of the day. The basic concept is this – following a weight training session the body's need for nutrients is heightened as muscle tissue has just been broken down. It is at this time that the body can make use of large quantities of *carbohydrates* and *protein* to rebuild the broken muscle tissues.

Training Terms

"*repetition*" refers to one complete movement from start to finish.

"*set*" refers to a group of repetitions. It is common to refer to the number of sets performed first and then the number of repetitions. For example, if you did 10 repetitions of squats 3 times you would say "3 sets of 10" or simply "3 by 10".

"*Intensity*" refers to the amount of weight that is being lifted in relation to the maximum that could be lifted. If, for example, your maximum on a certain lift is 100lbs and you are lifting 85lbs then the intensity is 85%, as you are lifting 85% of your maximum.

"*Volume*" refers to the amount of work you are doing. Routines can be low, medium, or high volume depending on your goals. For example if one day you went to the gym and did 3 exercises each for 3 sets of 10 reps the volume for the day would be 90 repetitions – $3 \times 3 \times 10$.

"*Plyometrics*" is a method of training that focuses on building speed and power. Plyometrics involves performing movements as fast as possible – usually involving jumping.

"*Cardiovascular training*" is training aimed at improving the functioning of the heart and lungs.

Training methods – Athlete

The athlete must *keep in mind* many different factors when designing a weight training routine. He must consider his actual sport and the type of athletic performance it demands, how his weight training could *interfere* with his sport and whether it would be *beneficial* to gain, lose, or stay at the same weight. Generally sports require the ability to produce force quickly; there are specific ways that this can be trained in the weight room. Athletes also in general need to be *flexible* and have good mobility, again, there are specific ways we can train this in the weight room. Let's let our imaginary athlete be a soccer player. He is currently in his "*off – season*" and so can afford to spend more time and energy in the gym. We will have him train 5 days/week, each session lasting one hour. Three of the days will be dedicated to weight lifting and 2 will be dedicated to *cardiovascular* training and *plyometrics*. The weight training will be composed of two main types – lifting *maximal* weights for low *repetitions* and lifting *sub-maximal* weights as quickly as possible. The cardiovascular training will be composed of both working at a low intensity for an extended time and working at a high intensity for short periods. The athlete will also perform *plyometrics* and practice sprinting.

Definitions of italicized phrases

"Day to Day"- This phrase is used to describe something that is done literally from one day to the next – something that is done each day or "daily". In the context of this reading it's used to say that the elderly may lift weights, not to improve their athletic performance or the look of their bodies, but simply to improve their ability to perform the many tasks that anyone does "daily". Things such as going up and down stairs, moving groceries, cleaning the house etc.

"Competitive Edge" - A "competitive edge" is anything that gives an advantage over the competition. Here it is used to say that having a good weight training routine could be an advantage over the competition. IE -If one athlete is weight training and the other is not the athlete that is weight training will have an advantage.

"The Goal in Mind" - This phrase is used to refer to the specific aim or outcome that is desired. We can say that we have a "goal in mind" of getting faster or a "goal in mind" of getting better grades this year at school.

"Window of Opportunity" - This phrase specifically refers to a passing, fleeting, or short lasting opportunity - An opportunity that will not be continually present. In the above context it refers to a small period of time after lifting weights where the body can use food in a way that it cannot at any other time.

"Keep in Mind" - This phrase is used to refer to an idea, concept, or group of ideas that need to be continually thought of. When we say that the athlete must "keep in mind many different factors" we are saying that there are many different things that the athlete must always consider and remember.

Discussion Questions

In general how popular (common) is going to the gym in Iran?

Do you yourself go to the gym and if so why?

Based on what you know of western culture do you believe going to the gym is more common in Iran or in North America?

Fill in the blanks (italicized words or phrases)

- 1) He told me that the _____ for the project was to improve conceptual English skills.
- 2) The period where an athlete does not play official games is known as the _____.
- 3) Running is an example of _____ training.
- 4) Some of my _____ activities include going to the gym, reading, and studying.
- 5) Often a busy sports schedule can _____ with a busy school schedule.
- 6) The time before a workout can be called _____, the time after a workout can be called _____.
- 7) Following a proper workout plan can give you a _____ over the competition.
- 8) When the other player tripped I saw my _____ to score a goal.
- 9) I must _____ a lot of information when writing a test.
- 10) When one thing is appropriate to another or "matches" they are said to _____ one another. "That hat _____ you" is a common way in which the word is used.

Appendix S.

Sample Lesson for control group

Gym on campus

Have you ever heard about gym on campus?

How do you choose the right gym?



1. SNAPSHOT

What do you think about these pictures?

Can you explain the locations?

Do you have any information about gym on campus?

2. CONVERSATION: Going to a fitness center

A. Listen and practice.

Mary and Tom meet at the gym to work out together where Mary has a membership plan and can invite one person every week.

Mary: What're you up to Tom, aerobics or treadmill?

Tom: I want to relax first. So I think I'll go for the aerobics. How about you?

Mary: It makes no difference for me, either way: aerobics or treadmill.

Tom: I get tired on the treadmill quickly these days.

Mary: Did you try to lower the pace?

Tom: Yeah. I was doing fine at a lower pace, then my trainer increased the pace a little bit.

Mary: How often are you doing it?

Tom: Well. I used to go on the treadmill twice a week. For the last two months I've kept putting it off.

Mary: The cardiovascular activities are like that. If you stop running even for a week, the heart gets lazy.

Tom: What time will the aerobics class begin? I need to change to my gym suit.

Mary: Take your time, Tom. We have almost an hour. Now it's 6 o'clock. The class begins at 6:55.

Tom: Great! Then let's meet in the gym room around 6:55.

Mary: Okay. See you then.

B. NEW Vocabulary:

Aerobics: Types of exercise such as walking, running, swimming, and dancing that help to regulate or improve blood circulation...

Pace: The rate of speed

Cardiovascular: Associated with the heart, its anatomy and function

C: PAIR WORK: practice the conversation in pairs.

3. READING

Do you need to get more energy during your time in college?

It may be final week; it may be your heavy course load this semester or may just be a bad, bad week. No matter the reason, though, you need to get energy so if you are a student in a university the best location for you which is convenient for you to go every day is campus gym.

Participating in campus gym outside the classroom not only plays an important part of creating lasting college memories but it's also a great way to alleviate the stress from your classes.

At almost any typical college or university in North America you will likely find a gym. Every university has a recreation office that provides a wide array of opportunities for Students, staff and the community to get active offering include recreational day trips, intramural leagues, varsity competition and much more. Membership is open to call full-time/ part time student for a nominal club fee.

Many members of the student body with different physical capability and athletic potential populate the gym. Choosing the right gym that will ensure your continued and overall progress is almost as important as finding a life long companion that will be with you through all the good and bad times. All personal training clients require an initial assessment prior to beginning their program trainer will be able to prescribe how many training sessions you may need and will have enough information to build a personalized program.

4. VOCABULARY

Matching words to their definitions: Match each expression with its meaning.

- | | |
|-----------------------|---|
| 1. Recreation | a. a field on which the buildings of a university are situated. |
| 2. Campus | b. When recreational sports are organized within a set Geographic area. |
| 3. Intramural sport | c. the opportunity to speak with a certified person trainer about your fitness goals and future training options. |
| 4. Varsity team | d. activity done for enjoyment when one is not working. |
| 5. Initial assessment | e. the principal athletic teams representing a college or a university. |

5. Practice on listening.

Listen to the conversation. Then choose the best answer for each question.

1. What does the man want to do after he graduates?

- A. He wants to become a teacher.
- B. He hopes to go on to graduate school.
- C. He'd like to work at a hotel.

2. What is the woman majoring in?

- A. history

- B. French
- C. computer science

3. How does the woman pay for college?

- A. She has a part-time job.
- B. She received a scholarship.
- C. Her parents are paying for it.

4. Where does the man work part-time?

- A. at a bakery
- B. in a library
- C. at a restaurant

5. What thing did the man NOT say about his job?

- A. His co-workers are friendly.
- B. He works long hours.
- C. The pay is okay.

6. CONVERSATION

A. Listen to girl talk to a friend about her plans for this semester:

Helen: I'm going to the gym in our campus this semester. Would you like come along?

Daniel: You belong to a gym? It seems that everyone that I meet here is involved in some kind of exercise program!

Helen: Oh, exercise is very popular nowadays, and this gym is the best in the area, why you don't try it today?

Daniel: I would like to get a little more exercise, so let's go.

B. Pair work

Make a conversation with your own information.

7. DISCUSSION

A. *Pair work:* Read the questions then share your answer with your partner

1. Do you yourself go to the gym and if so why?
2. How do you choose the right gym?

3. What are the advantages and disadvantages of joining gym on campus?

B. Group work: Take turns asking and answering questions above.

8. WRITING About favorite activities

- Write about your favorite sport or physical activity. Where do you usually do it?

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