
On the Differential Effects of the Teacher's L1 Use or L2-only Explanations on EFL Learners' Learning and Retention of Concrete and Abstract Words

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Abstract

The current study aims to add to the debate on whether or not the use of L2 learners' mother tongue should be allowed in the classroom by evaluating the efficacy of specific instruction types. The current project was administered in two Iranian EFL classrooms to determine the differential effects of teachers' first language (L1) use and second language (L2)-only explanations on Persian-speaking adults' acquisition and learning of concrete and abstract English words. A sample of 30 Low Intermediate and Intermediate level EFL learners was chosen for L1-use group; 30 participants were allocated to an L2-only use condition, and another 30 participants to a comparison group. Pretests, immediate posttests, and delayed posttests (four weeks later) in the form of the revised vocabulary knowledge scale (RVKS) were applied to all participants. The study found that teacher's code-switching can result in higher vocabulary improvements in immediate and delayed retention, notably for concrete words in the process of teaching and learning.

Keywords: vocabulary acquisition; Iranian learners of English; medium of instruction; first language use; second language explanations; concrete and abstract words

Background

The idea of code-switching has been extensively discussed in linguistics and a range of other related fields. This concept first came into view in Vogt's (1954) report on Weinreich Languages in Contact (1953). Weinreich used the term "switching codes," evidently borrowed from information theory (Fano, 1950). Jakobson (1953) and Haugen (1956) were among the first linguists to build up this notion.

The debate on code-switching between English as a Foreign/Second language (EFL/ESL) and the first language (L1) in English classrooms has been ongoing for over 20 years (Lee & Macaro, 2013). The omission of L1 from L2 classes was for a

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long time an indisputable presumption in foreign language teaching. This approach, advocating the exclusive or near exclusive use of the target language (Lightbown, 2001; Turnbull, 2000; Turnbull & Arnett, 2002; Wong-Fillmore, 1985), is supported by the reason that L1 use in the classroom would be counterproductive and can limit input and output opportunities in L2 (Chaudron, 1988; Lightbown, 1991; Liu, 2008; Mattioli, 2004). Researchers on second language acquisition (SLA) support a situation of maximizing L2 and escaping or limiting the use of L1 in language classrooms (Chambers, 1991; Duff & Polio, 1990; Ellis 1984; Ellis, 1994; Franklin, 1990; Levine, 2011; Turnbull, 2001). They argue that if language teachers use L1 excessively in the classroom, learners' sufficient exposure to L2 input is denied with adverse effects on L2 learning and may also delay L2 acquisition (Kang, 2008, Polio & Duff, 1994; Turnbull & Arnett 2002). Moreover, they claim that the use of L2 through the "comprehensible input" outline (Krashen, 1985), and "interaction" opportunities in the language classroom (Long, 1983) tend to be more contributive to successful second language acquisition than relying upon L1 to teach L2.

Phillipson (1992) attributes to this approach as the 'monolingual fallacy', which claims that language is ideally taught monolingually. However, teaching practices are not necessarily matched with the language policy makers' views and research reports that teachers have continued to use L1 in foreign and second language classrooms consistently (Dailey O'Cain & Liebscher 2009; de la Campa & Nassaji 2009; Ferguson 2003; Kang 2008; Polio & Duff 1994). On the contrary, there are actually suggestions for the inclusion of L1 in L2 classrooms. Based on these recommendations, using L1 does not create an obstacle to L2 learning; rather, it's a useful cognitive, affective, and linguistic tool to scaffold the development of the L2 learner (Atkinson, 1987; Auerbach, 1993; Canagarajah, 1995; Cummins, 2007; Elridge, 1996; Ferguson, 2003; Levine, 2003; Macaro, 2001, 2009; Qian, Tian, & Wang, 2009; Rivera, 1990; Rivers, 2011; Shamash, 1990; Tian & Macaro, 2012; Tian, 2014). Nevertheless, this should not be viewed as a confirmation for reducing the target language (TL) input and maximizing the usage of L1 in the language classroom, because even those who have consistently opposed the exclusion of L1 from the L2 classroom address that the use of L2 needs to be maximized (Butzkamm & Caldwell, 2009; Cook, 2001; Macaro, 2001).

The functions of L1 use vary from explanations of morphology and syntax (Gearon, 2006) to managing students' behavior (Franklin, 1990). However, the most common is to probably supply information on the meanings of lexical items in L2-dominated classrooms (Liu et al., 2004; Rolin-Ianziti & Brownlie, 2002). Littlewood and Yu (2011) drew from their findings that the L1 is generally "an efficient way of clarifying the meanings of words" (p. 71).

The main reason we are centering on vocabulary acquisition is the fact that acquisition of vocabulary has a key role in learning a second language (Sökmen, 1997). Another claim is that second language learners need to have a considerable

vocabulary size (Nation, 2001). Cook (1991) claims that vocabulary learning is required for the four language skills. Schmitt and McCarthy (1997) claimed that “a learner's L1 is one of the most important factors in learning L2 vocabulary” (p.2). Macaro, (2001, 2009) conducted two studies on code-switching and vocabulary acquisition concluding that there is no evidence for any negative effects of code-switching. Nation (2001) and Auerbach (1993) declared that the using the learner's L1 in the L2 classroom have a positive influence on learners' second language learning, particularly in the area of vocabulary. In an experimental condition, using brief lexical code-switches, Tian and Macaro (2012) suggested an affirmative effect on vocabulary acquisition by university students.

Vocabulary teaching generally includes two kinds of medium of instruction (MoI) to deliver lexical information in L2 classrooms: the first is using L1 and the second is L2-only use. By definition, the previous relates to the process in which a target word's meaning is explained via its L1 equal. It must be mentioned that, this particular MoI can be employed only when all learners share a similar L1 with their non-native speaker teachers (NNSTs) and if an L2 word and its translation correspondent can be precisely and directly matched with the body meaning. Another technique for presenting lexical explanation is using the L2, a procedure during which target words are explained via intra-lingual teaching methods, including definition, paraphrase, circumlocution, exposition, contextualization, along with the providing semantic neighbors (e.g. synonyms, antonyms, hypernyms, and meronyms) (Tian & Macaro, 2012).

An investigation by Kaushanskaya and Rehtzigel (2012) on the learning of new words concerning concrete versus abstract words notified that the bilingual influence is more distinct for learning unfamiliar concrete referents in comparison to abstract words. This conclusion claims that bilingual advantages for word learning might be embedded, to some extent, in bilinguals' greater awareness of semantic information in the course of learning.

Theories of lexical processing in bilinguals mainly presuppose the semantic representations of translation equivalents in a bilingual's two languages overlap (Kroll & Stewart, 1994). Nevertheless, there have also been ideas about several kinds of words overlapping in the bilingual semantic system to contrasting degrees. Especially, the distributed feature model (De Groot, 1992) presupposes that concrete words seem to share semantic characteristics through bilinguals' two languages than abstract words, and several behavioral findings have implied that concrete translation equivalents over the bilingual's two languages may share a greater semantic overlap compared to abstract translation substitutes (Paivio & Desrochers, 1980; Van Hell & De Groot, 1998; De Groot, & Keijzer, 2000).

Even though concrete words can be recognized from abstract words to a certain level, it ought to be minded that the difference between them is not adequately definite, as they quite simply all sit along a continuum that spreads from most abstract

to most concrete. For instance, words like *animal*, *flora*, and *vehicle* indicate concrete entities, but additionally hold some extent of abstractness which raises difficulty when it comes to FL learning. As mentioned above, previous studies on learning concrete and abstract vocabularies are more based on theories and presuppositions other than experimental and classroom-practice-based investigations. Along this line of argument, we also examined the differential effect of L1 use and L2 only use on learning concrete and abstract words to obtain more realistic results concerning concrete and abstract vocabulary learning. In this study we solely examined the difference between immediate vocabulary retention and long-term retention of concrete and abstract words, and comparing the acquisition of concrete versus abstract words was not the subject of this research in line with Zhao and Macaro (2016).

The present study aims to look at code-switching from classroom perspective. Classroom code-switching is described as using multiple linguistic code or language in the classroom by teachers and students. Although code-switching has been largely investigated in the context of ESL and immersion classrooms since the 1980s (Turnbull & Arnett, 2002), studies on code-switching in FL classrooms are brand-new (Lin 2013). The majority of the research on classroom code-switching has long been widely descriptive and few studies have been experimental investigating L1's role in TL acquisition (Macaro, 2009; Tian & Macaro, 2012; Zhao and Macaro 2016).

The majority of the studies on classroom code-switching between English and Persian used survey and/or interview data (Ghorbani, 2011; Hashemi & Sabet, 2013; Moghadam, Samad, & Shahraki, 2012; Momenian & Samar, 2011; Moradkhani, 2012; Nazary, 2008; Rahimi & Eftekhari, 2011; Rahimi & Jafari, 2011; Rezvani & Rasekh, 2011; Samani & Narafshan, 2016; Samar & Moradkhani, 2014; Simin, Teimouri, Kasmaee & Rezaei, 2005) and are not based on an analysis of the actual classroom language use. Therefore, it seems necessary to carry out more instruction-based and classroom-practice-based studies to cast more light on the exact practice of code-switching in the classroom, especially in the Iranian context which is still in its infancy.

Compared to the previous study by Zhao and Macaro (2016), the current research examines whether teachers' L1 use and L2-only explanations have any differential effects on Iranian EFL learners' acquisition of concrete and abstract English words. In the present study, a more realistic teaching procedure (retrieving target words after interventions) is carried out to lend more support and empirical observations about the L2 vocabulary teaching in instructional settings. The participants are low proficiency level EFL students; therefore, the material and assessments are consequently contrasting with Zhao and Macaro (2016). As reported by Ahmed & Jusoff (2009), code switching enhances the flow of classroom instruction since teachers don't need to spend a lot of time to describe or try to find easy and simple words to explain any misunderstanding that could happen. Many experts acknowledge that L1 plays a huge role in language teaching, mainly for the

low proficiency learners (LPL), providing a basis for learners to enhance L2 structures, particularly during collective activities in the classroom, arranging feeling of security and confirming the learners' real experiments, letting them to represent themselves (Atkinson, 1987; Nation, 2003; Schweers, 1999; Swain & Lapkin, 2000; Tian & Macaro, 2012; Wells, 1999).

Although studies have centered on teacher L1 use concerning quantity and functions, few researches have studied its effect on language learning, due to the diverse variables that mediate in this kind of process-product study, especially when it occurs in intact classrooms. The higher need for English language learning for instrumental purposes and the failure of the EFL learners to accomplish a higher level of proficiency and the need for studies based on an analysis of the actual classroom language use and instruction-based and classroom-practice-based data to support the L1 use in EFL classrooms in Iran are crucial factors to conduct this research. Another issue could be that teachers who start their teaching as soon as they complete their studies are usually in a state of confusion about certain issues of English Language Teaching (ELT) in the first few experimenting years of their careers. The first and the foremost issue they encounter is whether or not they can use English-only policy or they can apply L1 (Shuchi & Shafiqul Islam, 2016).

Even though several studies have extensively centered on teacher L1 use concerning quantity and purposes, (Esfahani & Kiyomarsi, 2010; Fatemi & Barani, 2014; Hadadi, Abbasi & Goodarzi, 2014; Mirhasani & Mamaghani, 2009; Noorbar & Mamaghani, 2016), there seems to be no study on its influence on vocabulary learning in the Iranian context. Almost all the studies so far have been based on survey, questionnaire and/or interview data and not an instruction-based and an experimental approach. Therefore, conducting an experimental investigation based on an analysis of the actual classroom language use regarding vocabulary learning is crucial to fathom whether or not to use L1 in the EFL classroom. Accordingly, the differential effect of using code-switching or L2 only on learning concrete and abstract words is investigated for the first time in the context of Iran.

Review of Related Literature

Theoretical Arguments for the Use of L2-Only Explanations

One controversy that is recurrently raised by those who approve using L2-only explanations is in accordance with the L1 = L2 acquisition hypothesis (Dulay & Burt, 1974), which implies that the mechanisms underlying L2 learning resemble those underlying L1 learning. This means that, L2 learning can to some extent be similar to infant L1 learning. It ought to be reminded however that such a monolingual setting might work for the acquisition of some linguistic aspects and structures, but it wouldn't cover every feature of a language system. This may include vocabulary, for that, the concepts that L2 words interpret are already shaped via the L1.

Therefore, the effectiveness of L2-only use needs to be revised. This exception is extremely correct for L2 adults, a population whose 'brain plasticity' is low and whose L1 is deeply developed in the brain (Seidenberg & Zevin, 2006). The next claim in support of teachers' L2-only use concerns to the Krashen's input hypothesis, which supposes that input can be comprehensible by casting a 'net' in the L2 to assure that learners with various competence levels are all capable of successfully understanding the teaching content (Krashen & Terrell, 1983). It should be taken into consideration that L2 input is unquestionably necessary, yet it is not an adequate condition for intake to appear because in some cases changing input into intake generally demands other mediating factors. For instance, an item's perceptual saliency, learners' attention, and learners' prior encyclopedic and linguistic knowledge (Gass, 1997; Schmidt, 1990). As Gass (1988, p. 204) marked, for L2 learners, the most important thing is not comprehensible input but comprehended input. The first one is 'managed by the person supplying the input', and the second one is 'learner-controlled'. When the subject of MoI is addressed from another aspect, a developing frame of literature has confirmed teachers' L1 use, particularly for L2 vocabulary learning and teaching.

Literature Supporting the Effectiveness of Teachers' L1 Use in Teaching Vocabulary

The L2 lexical access and processing procedure provides understanding of the role learners' L1 plays in L2 vocabulary learning and teaching. As outlined by Kroll and Stewart's (1994) revised hierarchical model (RHM, see Figure1 below), an L2 word is believed to be matched onto its translation equivalent at the first stage of learning (i.e. the word association stage) (the dotted lexical link between L1 and L2). With learners' improving L2 fluency, the link between an L2 word and its L1 translation develops (the solid lexical link between L1 and L2) and the link between an L2 word and its conception is built up to the conceptual system shared by the two languages of a bilingual learner (i.e. the conceptual mediation stage) (dotted conceptual link becomes solid). Based on this point of view, the L1 is associated with accessing and processing lately encountered L2 words, in particular when vocabulary learning is considered as a procedure instead of an end phase. In this manner it looks incorrect to note teachers' L1 use as a resource of negative conflict that restricts the rate and procedure of L2 vocabulary acquisition (Zhao, & Macaro, 2016).

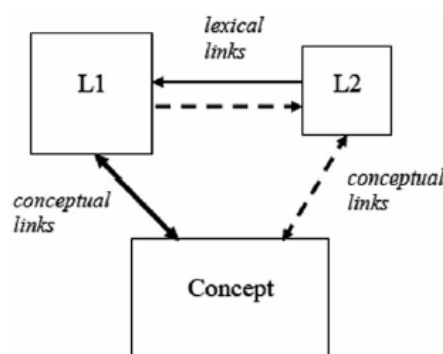


Figure 1: The Revised Hierarchical Model (adapted from Kroll and Stewart 1994)

Jiang (2000, 2004) suggested another model that presupposes a probable developmental procedure for L2 vocabulary learning in instructional framework, a procedure which might be put into three main stages: the L2-L1 word association stage, the L1 lemma (i.e. semantic and syntactic) mediation stage, and the complete integration stage. This three-stage model is along with the RHM, in the manner that both affirm the role that the L1 probably plays in L2 lexical processing, even though its effect can vary greatly based on L2 learner's language knowledge and how words are learnt.

Macaro (2009) demonstrated the findings of two researches regarding the effectiveness of code-switching on students' vocabulary learning. Macaro concluded that when given the L1 equals of new L2 words, “the amount of processing that a learner has to do is in fact increased rather than decreased”, it conveys that more cognitive processing takes place, and students seemed to manage “deeper processing opportunities” compared to L2 definitions provided (Macaro, 2009, p. 47).

All words have their particular physical forms, phonological elements, syntactic functions, semantic properties, and pragmatic implications. Among these characteristics is word concreteness or abstractness. These qualities define words as individual items in the lexical repertoire with different word processing patterns and consequently distinct vocabulary learning process for FL learners.

Previous Studies on Learning Concrete and Abstract Words

Applying a modal view of languages (Barsalou, 1999), the procedures of concrete and abstract words' processing are regarded as different. Learners are considered to carry both physical and psychological features. In this way processing concrete words is more expected to be interceded by the learners' sensory-motor system (e.g. visual, auditory, and/or olfactory). In comparison, such a mechanism or dual coding approach, in the words of Paivio (1986), is less probable to be engaged in processing abstract words.

Additionally, based on the distributed feature model (De Groot, 1992a, b; 1993; see Figure 2), the degree to which two languages share conceptual representations widely depends upon the activation degree of common features that both languages possess. The concepts that concrete words represent are considered to

be more similar across languages (more links between different concrete words in L1 and L2) in comparison with those of abstract words (only one common abstract word between different concrete words in L1 and L2). Studies in bilingualism have indicated that concrete words are more simply learned than compared to abstract words (Altarriba & Bauer, 2004; de Groot, 1992; Duthie et al., 2008; Schwanenflugel et al., 1992). The explanation for this has been related to the visual imagery of concrete words. The 'dual-coding theory' (Paivio & Desrochers, 1980) hypothesizes a concreteness effect namely, that is to say the productive imagery of concrete words kept in the brain assists in retrieval of lexical information.

Altogether, the involvement of learners' sensory-motor system and a superior level of conceptual overlap between languages assist the acquisition of concrete words, a procedure in which the distinctive impacts of MoIs (medium of instructions) might probably be expounded.

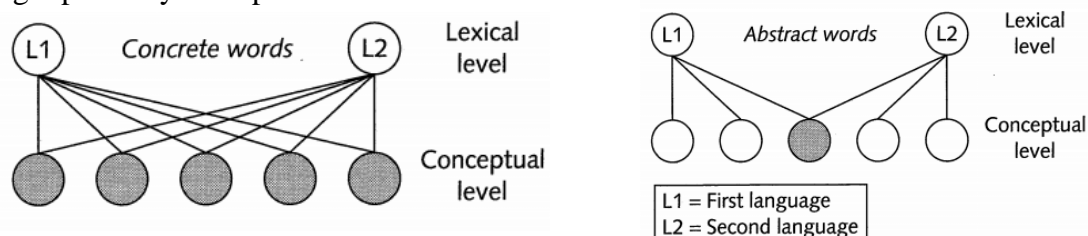


Figure 2: The distributed feature model (adapted from De Groot 1992b)

According to the distributed feature model as the framework, it may be probable to develop supposition with respect to the strengths of the concreteness effects in bilingual versus monolingual learning. In monolinguals, production of a concrete word generates a broader lexical–semantic network than it does the presentation of an abstract word (De Groot, 1989; Grondin et al., 2009; Schwanenflugel & Shoben, 1983), and then the same is probably true for bilingual speakers.

Even though some studies have centered on teacher L1 use concerning quantity and purposes, (Esfahani & Kiyoumars, 2010; Fatemi & Barani, 2014; Hadadi, Abbasi & Goodarzi, 2014; Mirhasani & Mamaghani, 2009; Noorbar & Mamaghani, 2016), one or two studies investigated its influence on language learning in Iranian context especially on vocabulary learning, perhaps due to the range of variables that mediate in such a process–product study, especially when it occurs in intact classrooms. Those studies are based on survey, questionnaire and/or interview data and they are not an instruction-based experimental research. Therefore, it is crucial to conduct a study based on an analysis of the actual classroom language use regarding vocabulary learning in the context of Iran.

Research Questions

In the context of the present study, there seems to be an empirical gap in relation to the use of L1 in EFL classrooms. The present study attempts to fill this gap and addresses the following research questions:

1. Is there any significant difference between immediate vocabulary retention and long-term retention of concrete words?
2. Is there any significant difference between L2 only group and L2+L1 explanation group in immediate vocabulary retention and long-term retention of concrete words?
3. Is there any significant difference between immediate vocabulary retention and long-term retention of abstract words?
4. Is there any significant difference between L2 only group and L2+L1 explanation group in immediate vocabulary retention and long-term retention of abstract words?

Methods

This study was directed in Iran between May and July 2017. The research design is represented by two phases: the pilot study phase and the main study phase. To check and ensure the suitability of the level of the texts, to examine how much time the teaching and testing process would take, to test the intervention strategy and materials, and to identify the components that are most important to the facilitation of the intervention, a pilot study was carried out with 15 students who did not take part in the main research phase.

A quasi-experimental design was conducted in the main study, including two intervention groups. In the intervention groups, the target words were taught either through teachers' L1 use or via L2-only explanations after a reading practice task, while in fact the comparison group did not receive any treatment related to vocabulary learning. Pre-tests, immediate post-tests (third week of the study after teaching the target words completely), and delayed post-tests (in the fifth week of the study) in the form of the revised vocabulary knowledge scale (RVKS) (Zhao & Macaro, 2016) were given to all participants.

Participants

Participants were 90 male learners (30 in the L1-use group, 30 in the L2-only group and 30 in the comparison group) aged between 20 to 37-year old who were learning EFL at two language institutes in Ahvaz, Iran. They were recruited from seven intact classes with a range of 15 to 18 students. This population had been learning EFL for approximately 2 years, amounting to an estimated 312 hours of classroom exposure to English (on average, approximately 3 hours per week). Their native language was Persian and their education level was Undergraduate. Their proficiency level was assumed to be B1 (Low Intermediate and Intermediate), but to test their homogeneity, their average proficiency levels were estimated through the Cambridge PET exam (Preliminary English Test), indicating that they had an average vocabulary size of approximately 4,000 words, according to the British National Corpus (2007).

The randomization of participants was impossible due to practical educational considerations. Therefore, short demographic questionnaires which consisted of six

questions regarding age, levels of education, length of studying English, previous English score, ethnicity and native language, the Cambridge PET exam (Preliminary English Test), a vocabulary size test (VST) (Nation & Beglar, 2007) and a Word Associates Test (WAT) (Read, 1998) were given to the participants before the intervention to iron out any initial differences and to guarantee that any possible differences in vocabulary learning outcomes could be associated to the intervention instead of to sample differences. In this study, participants' gender is not the focus of the researcher.

Teacher and teaching procedure

The teacher who took part in this research had five years of EFL teaching experience. The researcher and participating teacher outlined the teaching process. Each EFL reading session in the intervention groups included four phases: a lead-in phase, a task-type introduction phase, a reading-for-scanning-or-skimming phase, and a word explanation phase.

- 1) Each session began with a two-minute warm-up to introduce the particular reading topic and to make participants interested.
- 2) Next, the question type tasks in each reading exercise were covered as an introduction to the topic. For example, in one task type, the students completed sentences by filling in the blanks with appropriate words or phrases provided from the reading passage which did not include any of the target words.
- 3) After the teacher had given precise instructions, ten minutes were given to the participants to work on their reading skills by doing the tasks related to the texts. The tasks were specifically designed to prevent the target words.
- 4) The target words were then presented using PowerPoint slides, and their meanings were explained through teachers' L1 use or L2-only descriptions (see Appendix 1 for examples).

The target words were presented at the last stage of teaching instead of an earlier stage when the learners were asked to do reading or the exercises, and it was important that students comprehend the reading first to ease inferring the meaning of the target words. Then the target words were taught and practiced once after one week since the purpose of the study was to examine the difference between L2 only group and L2+L1 explanation group in immediate vocabulary retention and long-term retention of concrete and abstract words. If the target words had been taught during the reading and practiced in reading exercises, it would have affected the learning process of the target words.

In order to assure reliability of intervention procedure, the teacher used a checklist to direct their teaching process. Furthermore, the researcher monitored the teaching sessions and then provided particular feedback, if needed, after classroom observations. The same routine was applied with the comparison group, except that

the target words were not taught. Instead, these students were guided to analyze two or three syntactically complicated sentences from the reading materials, and those sentences did not include any target words from the study.

Instruments and Materials

Reading Materials

The reading materials were chosen and adapted from the articles in British Council Magazine Article (see Appendix 2 for an example) based on students' proficiency level B1 (Low Intermediate and Intermediate). Eight articles were extracted. Informal individual interviews were carried out to show that the students had little or no access to these contents, indicating that they had little or no prior knowledge of the reading materials. Three baseline tests were also administered to the participants to guarantee that no learner had knowledge of the target words, including the vocabulary size test (VST) (Nation & Beglar, 2007), the word associates test (WAT) (Read 1998) and the Cambridge PET exam (Preliminary English Test). The suitability of the reading materials and the target words was tested and verified by examining via the vocabulary profiler. 5% of the vocabulary in each text was at or above the 5,000-word level among which the target words were chosen.

All the words in the input contents, excluding pronouns, were therefore profiled and analyzed using the vocabulary profiler on the Complete Lexical Tutor website (Cobb 2000). Pronouns were omitted from the analysis, since they are not included in the British National Corpus. It has been proposed that L2 readers ought to know 95% of the running words (i.e. tokens) in a text to acquire sufficient comprehension (Laufer, 1989). Attempts were made to assure that at least 95% of the input texts' tokens were below the 5,000-word level, according to the vocabulary profiler results. Although, if a text was observed to have more than 5% of the tokens at or above the 5,000-word level, L1 translations of non-target words were given in brackets to lessen learners' comprehension struggles.

Selecting Concrete and Abstract Words

First, eighty potential experimental words were chosen from the input texts: forty concrete words, and forty abstract words. Most concrete words (e.g. herb, rock pool and wizard) were related to objects or entities that can be apprehended via our sensory system and most abstract words (e.g. achievement, harm and spell) interpreted feelings or emotions. No target words were cognates with their L1 translations. Most of them were at or beyond the 5,000-word level according to the vocabulary profiler results although, some words at or below the 4,000-word level, might still have been unfamiliar to the students according to the researcher's and participating teachers' understanding of their vocabulary knowledge.

Only those words that met the following criteria were applied as the target words in this study: their meanings could not be simply deduced from the input texts (helpfulness of the contextual clues), they were remarkably concrete or abstract (the degree of concreteness or abstractness), and they were regarded to be notably practical to the participants.

Finally, 72 words were selected as target words based on the normalizing procedure (see Appendix 3 for 36 concrete and 36 abstract items). Notice that some words and phrases chosen from learners' course books were also covered in each RVKS test to alleviate the Hawthorne effect.

Assessments

The participants of the comparison group and intervention groups received three baseline tests preceding the intervention, including the VST (Nation & Beglar, 2007), the WAT (Read 1993), and the Cambridge PET exam (Preliminary English Test) reading, writing, speaking and listening comprehension test. A brief description of each test is introduced below:

The VST measures learners' L2 vocabulary size by counting how many words can be justly paired by meaning to their L1 equivalents. In consideration of the participants' English proficiency levels, sections of the VST will be administered to them (varying between the 3,000-word and the 5,000-word level) (Nation, 2006). A learner's total score on the 140-item test needs to be multiplied by 100 to find the learner's total vocabulary size. It typically takes around 40 minutes to sit the 140-item test.

The WAT has been viewed as a reliable way to measure the depth of learners' L2 vocabulary knowledge (Read, 1998). The test contains 40 items. Each item consists of one stimulus word, which is an adjective and two boxes each containing four words. Among the four words in the left box, one to three of them can be synonymous to one aspect of, or the whole, meaning of the stimulus word, while among the four words in the right box, there can be one to three that collocates with the stimulus word. Each item always has four correct choices. However, these choices are not evenly spread. In scoring, each word correctly chosen was awarded one point. The maximum possible score, therefore, was 160 for the 40 items.

Cambridge English Preliminary (PET) is made up of four parts, namely reading and writing, listening and speaking. The reading comprehension component consists of five parts, 35 questions. Writing includes three parts, 7 questions. Participants' listening proficiency was assessed using the PET as well, in which they listen to four parts, 25 questions. For each part, they have to listen to a recorded text or texts and answer some questions. They hear each recording twice. Speaking test has four parts and the students take it together with another candidate.

The revised vocabulary knowledge scale (RVKS) was administered as a pretest, post-test, and delayed post-test to evaluate and observe participants' learning outcomes in the present study (Zhao & Macaro, 2016) (see Appendix 4).

The RVKS test was scored as follows: 0 was attributed to level I. For level II, 1 point was awarded to the correct choice but 0 to the wrong one. Two points were assigned when test takers defined the meaning of a target word properly either in the L1 or in the L2. On the contrary, if an erroneous explanation was given, 0 (unrelated to the correct category) or 1 (related to the correct category) was given.

Data Collection Procedures

All groups studied the eight articles in 4 weeks. Each three texts were given weekly to give the learners an equal chance in performing the tasks related to each reading containing new words including the target words. As vocabulary gains for unknown words can be augmented more effectively when a reading text is accompanied by text-based vocabulary exercises than without them (Paribakht & Wesche, 1993, 2000), and since an effective vocabulary learning program should include repeated exposures to the same words over reasonably short time spans (Waring & Nation, 2004, p. 18), the target words were retrieved weekly in activities to reinforce the students' memory after they acquired new vocabularies.

Results

Regarding learning concrete and abstract words, the outcomes of the L1 use group (i.e. the class in which the target words were explained through L1 equivalents), the L2-only use group (i.e. the class in which the target words were explained through L2-only explanations), and the comparison group (i.e. the class in which the target words were not explicitly explained) were analyzed over three time points using a 3×3 mixed ANOVA, with instructional type (L1-use, L2-only explanations, and no explicit explanation provided) as a between-subjects factor and time of test (pre-test, post-test, and delayed post-test) as a within-subjects factor. Huynh-Feldt corrected values were reported in cases where the assumption of sphericity was violated. In this study we examined the difference between immediate vocabulary retention and long-term retention of concrete and abstract words and comparing the acquisition of concrete vs. abstract words was not the subject research (Zhao & Macaro, 2016).

Concrete Words

As for learning concrete words, the analysis of 3×3 mixed ANOVA for learners' performances on RVKS tests are illustrated in Table 1 – 3.

Table 1*Descriptive Statistics for Concrete Words*

	Instructional Type	Mean	SD
Pre-Test	Comparison	.73	.785
Pre-Test	L1use	.73	.785
Pre-Test	L2only	.73	.785
Post-Test	Comparison	1.83	1.341
Post-Test	L1use	35.00	1.339
Post-Test	L2only	19.50	2.432
Delayed Post-Test	Comparison	1.33	1.061
Delayed Post-Test	L1use	34.03	1.351
Delayed Post-Test	L2only	16.00	1.819

Table 2*Multivariate Tests for Concrete Words*

Effect		Value	F	Sig.	Partial Eta Squared
time	Pillai's Trace	.993	5895.161	.000	.993
	Wilks' Lambda	.007	5895.161	.000	.993
	Hotelling's Trace	137.097	5895.161	.000	.993
	Roy's Largest Root	137.097	5895.161	.000	.993
time *	Pillai's Trace	1.249	72.340	.000	.624
	Wilks' Lambda	.009	418.232	.000	.907
Instructional Type	Hotelling's Trace	84.410	1793.702	.000	.977
	Roy's Largest Root	84.057	3656.473	.000	.988

Table 3*Tests of Between-Subjects Effects for Concrete Words*

Source	Mean Square	F	Sig.	Partial Eta Squared
Intercept	40260.033	21469.459	.000	.996
Instructional Type	10847.244	5784.508	.000	.993
Error	1.875			

The results confirm that there was a significant main effect for time of test, $F = 5895.161$, $p < 0.001$, with a large effect size (Partial Eta Squared = .993), and for instructional type, $F = 5784.508$, $p < 0.001$, with a large effect size (Partial Eta Squared = .993). Additionally, there was a meaningful time of test \times instructional type interaction, $F = 418.232$, $p < 0.001$, with a large effect size (Partial Eta Squared = .907).

The ANOVA analysis was supplemented with Bonferroni-corrected post hoc pairwise comparisons. The results show that the L1 use group remarkably outperformed the L2-only use group in learning concrete words in both post-test and delayed post-test, all p values < 0.001 .

In addition, both intervention groups improved significantly in post-tests relative to pre-tests, both p values < 0.001 . There was a significant decline at delayed post-test compared with post-test, In the L2-only use group, p values < 0.001 . However, there was still a significant improvement in delayed post-tests compare to pre-tests, p values < 0.001 . Furthermore, in the L1 use group, there was a drop at the delayed post-test in respect to the post-test, p values < 0.001 , but there was no significant change according to the group's delayed post-test and post-test Mean Scores. Additionally, there was a significant improvement in delayed post-tests relative to their pre-tests, p values < 0.001 . As for the comparison group, learners' performance demonstrated no significant differences between pre-tests, post-tests, and delayed post-tests. These effects are displayed in Figure 3.

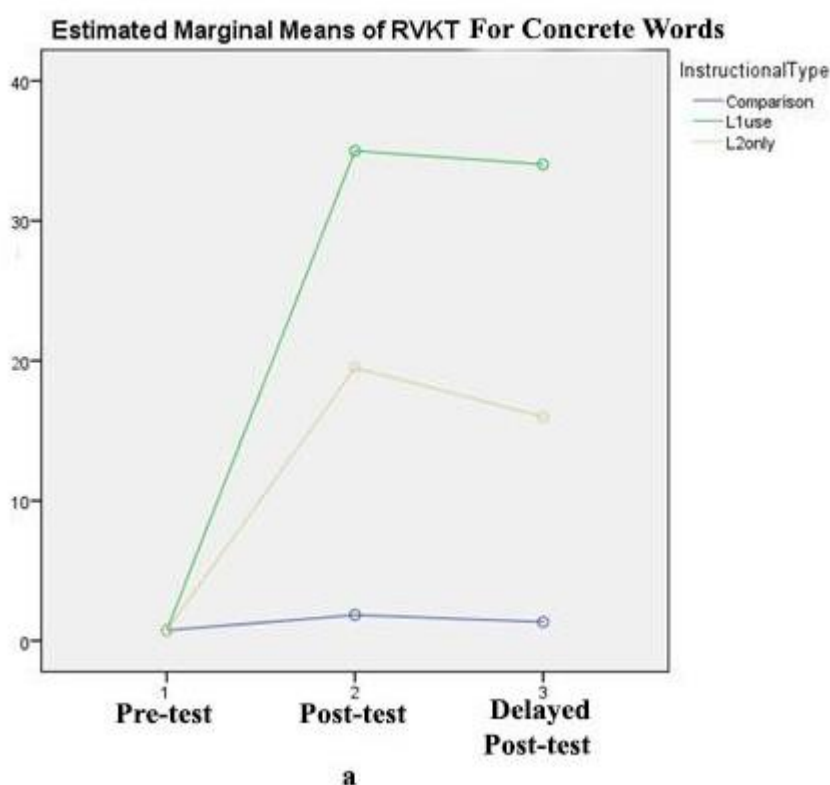


Figure 3: Mean Scores of Correct RVKS Test Responses for Concrete Words in Three Groups (the maximum score for each test was 72)

Abstract Words

As for learning abstract words, the analysis of 3×3 mixed ANOVA for learners' performances on RVKS tests are reported in Table 4--6.

Table 4*Descriptive Statistics for Abstract Words*

	Instructional Type	Mean	SD
Pre-Test	Comparison	.60	.724
Pre-Test	L1use	.60	.724
Pre-Test	L2only	.60	.724
Pre-Test	Total	.60	.716
Post-Test	Comparison	1.70	1.317
Post-Test	L1use	33.70	1.535
Post-Test	L2only	16.40	1.545
Post-Test	Total	17.27	13.232
Delayed Post-Test	Comparison	1.27	1.081
Delayed Post-Test	L1use	30.70	1.535
Delayed Post-Test	L2only	9.33	1.561
Delayed Post-Test	Total	13.77	12.565

Table 5*Multivariate Tests for Abstract Words*

Effect		Value	F	Sig.	Partial Eta Squared	
time	Pillai's Trace	.989	3819.301	.000	.989	
	Wilks' Lambda	.011	3819.301	.000	.989	
	Hotelling's Trace	88.821	3819.301	.000	.989	
	Roy's Largest Root	88.821	3819.301	.000	.989	
time *	Pillai's Trace	1.872	637.993	.000	.936	
	Instructional Type	Wilks' Lambda	.002	948.921	.000	.957
		Hotelling's Trace	65.932	1401.059	.000	.971
		Roy's Largest Root	57.897	2518.533	.000	.983

Table 6*Tests of Between-Subjects Effects for Abstract Words*

Source	Mean Square	F	Sig.	Partial Eta Squared
Intercept	30020.033	13057.989	.000	.993
Instructional Type	9645.811	4195.695	.000	.990
Error	2.299			

The results depict that there was a significant main effect for time of test, $F = 3819.30$, $p < 0.001$, with a large effect size (Partial Eta Squared = .989), and for instructional type, $F = 4195.69$, $p < 0.001$, with a large effect size (Partial Eta Squared = .990).

Moreover, there was a significant time of test \times instructional type interaction, $F = .957$, $p < 0.001$, with a large effect size (Partial Eta Squared = .957). The ANOVA analysis was supplemented with Bonferroni-corrected post hoc pairwise comparisons. The L1 use group significantly improved more than the L2-only use group in the post-test and the delayed post-test, all p values < 0.01 ; the intervention groups declared meaningful progress in the post-tests relative to their pre-tests, both p values < 0.001 , and drops in the delayed post-test relative to the post-tests, both p values < 0.001 . However, there were still significant improvements in the delayed post-tests compared with their pre-tests, both p values < 0.001 . These effects are illustrated in Figure 4.

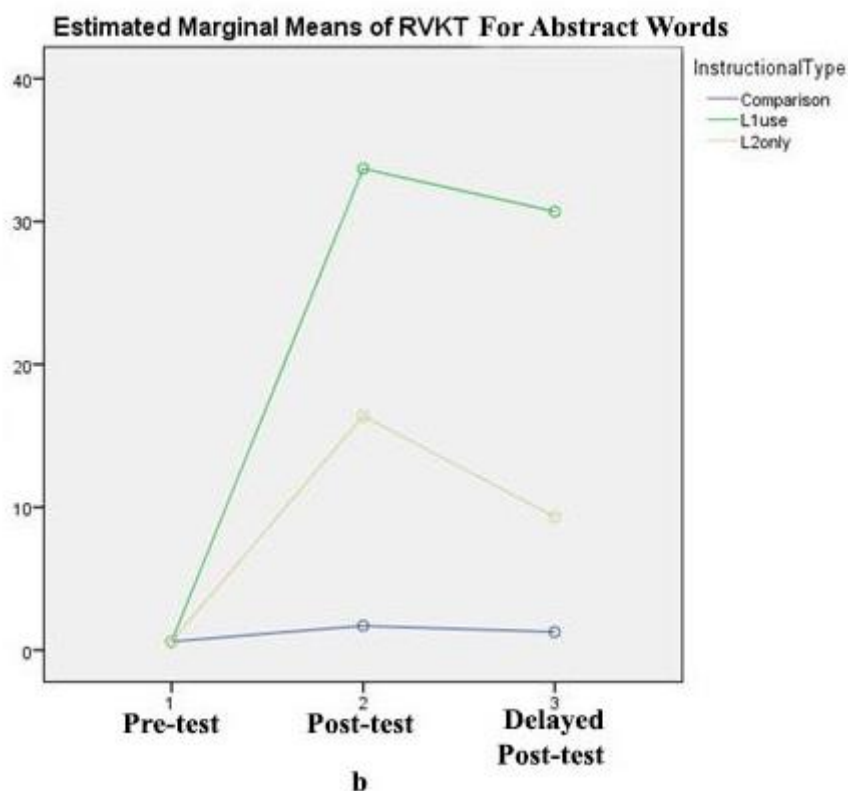


Figure 4: Mean Scores of Correct RVKS Test Responses for Abstract Words in Three Groups (the maximum score for each test was 72)

To sum, in both immediate and delayed recall of the target words' definitions, the two intervention groups noticeably outperformed the comparison group, and the L1 use group considerably performed better than the L2-only use group in terms of learning concrete and abstract words. The intervention groups had considerable advancements in post-tests compared with delayed post-tests and in delayed post-tests in comparison with pre-tests, in the L2 only use group, there were not notable decreases in delayed post-tests compared with post-tests, particularly for concrete words.

Discussion

The present study has specified a different prospect on classroom code-switching and has probably featured that L1 use considerably develops vocabulary acquisition and

retention and should not necessarily be ignored as something negative in a lower-secondary EFL classroom.

In this research, the intervention groups' better achievements compared to that of the comparison groups' implies that explicitly defining new words in L2 classrooms can be beneficial, a finding agreeing with the one reported by Zhao and Macaro (2016). Additionally, teachers' L1 use was far more remarkable than their L2-only explanations with regards to the acquisition of concrete and abstract words. This conclusion is in line with previous research that found the positive effect of teachers' L1 use in L2 vocabulary learning (Hennebry, Rogers, Macaro, & Murphy, 2013; Lee & Macaro, 2013; Sonbul & Schmitt, 2010; Tian & Macaro, 2012; Zhao & Macaro, 2016). There are two potential interpretations to clarify L1 use's advantage over L2-only explanations. First, the lexical information presented through teachers' L1 use and L2-only interpretations may be restored and processed variously. To demonstrate, when a translation equivalent is given, an immediate link will relate an L2 word and its translation.

Accordingly, L2 learners will depend greatly on the lexical route designated in the RHM to retrieve the L2 word. Learning L2 vocabulary through L1 translations forms in a relatively simple routine, and such directness would possibly assist the progress of learners' recovery of concrete and abstract word meanings easier and successfully. In comparison, processing an L2-only explanation is more complicated, since learners have to try to comprehend and integrate the lexical information, to conform to their ingrained conceptual knowledge, and to derive the target word's meaning. Such a process is graphically illustrated in Figure 5.

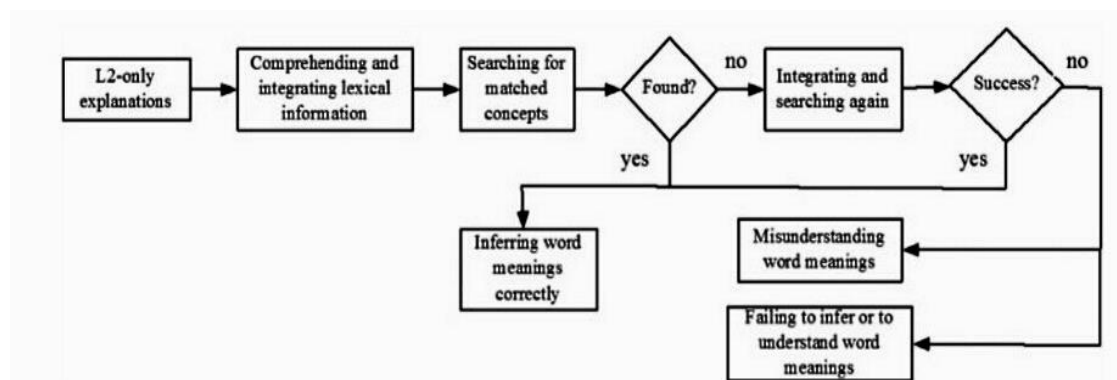


Figure 5: A Flowchart of Processing L2-only Explanations by Learners

Therefore, it can be discussed that learners might meet different challenges in learning L2 vocabulary via teachers' L2-only explanations. For example, some teachers' explanations, relatively deduced from personal experience, could possibly be idiosyncratic. Accordingly, when a piece of lexical information goes out of learners' perceptions' circle or the present level of their conceptual information about a target word's referent, their possibilities of successful deriving the meaning will be considerably decreased. Preferably, learners have no choice but to pick a candidate meaning that they consider most adequate, but that candidate may in fact be quite

different from the target meaning. When this kind of candidate choosing appears, learners almost possibly perceive the 'best candidate' as the target word's real meaning unless they recognize that they have misconceived it (Zhao & Macaro, 2016).

The next possible reason has to do with the indefinite semantic frameworks relating to the target word and its semantically correlated words. This ambiguity comes from a substantial likeness between members of the same family or 'family resemblance' (Wittgenstein, 2009). As a result of insufficient definite semantic boundaries absence, it is probable that learners misunderstand its neighboring meanings for the target one, specifically with subordinate-level words. Evidence can be detected in the incorrect study participants' RVKS test answers (see Table 7 for examples). For instance, the target word *wagon* has many characteristics in common with its neighboring word *truck* or *trailer*, as both associate with a vehicle used for transporting goods. Consequently, some participants mixed up the meaning of *truck* for that of *wagon*.

Table 7

Examples of Inaccurate RVKS Test Answers from the L2-only Use Group

Target words	L2 definition	Inaccurate RVKS test answer
Authority	The power to give order and enforce actions	سلطه (domination)
Community	A group of people living in the same place or having a characteristic in common	خانواده (family)
Reward	A thing given in exchange for good work or achievement	سود (Benefit)
Canopy	An ornamental cloth held up over something	پرده (curtain)
wagon	A vehicle used for transporting goods	کامیون (truck)
sprinkler	A device that sprays water	اب پاش (spray)

Note: Answers are presented in Persian characters first, accompanied by their English translations

Another significant finding was that vocabulary retention was noticeable in the long-term, that could be related to the levels-of-processing theory; that is, information processed at a deep level are generally recalled better than information developed at a shallow level (Craik & Lockhart, 1972). In this survey, lexical information was developed with sufficient depth and precise elaborations. The target words were recovered after intervention; therefore, the target words' meanings were well retained in long-term memory. In spite of the fact that all the target words including concrete and abstract words were practiced equally in both L1-use and L2-only groups once before immediate post-test, the results still indicated a significant difference between L1 use and L2 only groups and between concrete and abstract words. Since there was no practice regarding the target words between immediate and delayed post-test the

results of delayed post-test define the effectiveness of L1 use method in comparison with L2 only method. This holds true recognizably about L1 use MoI, and concrete words. Therefore, long-term retention can be attributed to the L1 vs. L2 use.

Finally, L1 use was discovered to be better than L2-only explanations disregarding word type. As discussed previously, concrete words' imagery system and a major level of conceptual overlap across languages aid the progress of their recall; nevertheless, such a benefit does not make the inadequate MoI efficacy insignificant. However, both intervention groups, particularly L1 use group, exceeded in acquiring and recalling the concrete words compared to the abstract words.

Conclusion

The techniques non-native speaking teachers (NNSTs) describe L2 words affect learners' acquisition of concrete and abstract words. The current study investigates the preference of teachers' L1 use over L2-only definitions. How well learners remember L2 words is influenced by the mechanisms through which learners perceive, integrate, develop, and recall pieces of lexical information. Teachers' L1 use is found to be more effective than L2-only descriptions for both classes of words, even though there are processing dissimilarities between concrete and abstract words.

Findings prove that Iranian EFL learners have a greater capability to learn words which are defined in L1+L2 MoI than L2-only MoI. It is obvious from the results that words having a L2-only definition are problematic to learn, remember and recall even when they are practiced and exercised in a given amount of time.

This study's results provide a number of pedagogical implications with regard to present conceptualizations associated with L2 vocabulary teaching and learning in training settings. Learners take advantage of explicit instruction of L2 vocabulary after a reading exercise, and teachers' L1 use functions superior to L2-only explanations for the acquisition of concrete and abstract words.

When instructors employ L2-only explanations, distinctions between a target word's meanings plus those of semantically linked words have to be explained. Furthermore, teachers need to be motivated to consider a learner-centered strategy in giving L2-only explanations. Preferably, every description would be within each learner's experiential scope and at or close to their world knowledge levels. This appears to be crucial to present learners a couple of seconds to perceive, integrate, process, and then infer the lexical information given in the L2-only.

It will be recommended for policymakers as well as syllabus designers to take into account the MoI's function in L2 vocabulary teaching and learning and to supply evidence-based instructions for teachers to carry out in practice. Textbook writers and material developers would be well suggested to obviously point out the favored MoI for defining concrete and abstract words in L2 classrooms. On the plus side, this has been noticed in several course books, for example 'English Result' series for adults and 'Project' series for teenage L2 learners. This kind of direction can be applied to

newer text books to increase learners' better understanding of the materials taught in the classroom by using their first language. The matter regarding L1 use ought to be completely reviewed in teacher training courses, by that inform beginners of the respective pros and cons of being a non-native speaking teacher (NNST) and a native speaking teacher (NST).

Second language organizations may well utilize the present research by means of its policy-making implications. It could be advised to provide a more adjustable perspective towards the L1 using in their L2 classes and permit their teachers to practice a moderate code-switching method regarding the situations, particularly in lower level classes and to think about code-switching as a facilitator in the classroom. Nevertheless, they are recommended to use their students' mother tongue cautiously. Extreme use of L1 in L2 classes could be adverse and deprives the students of adequate L2 exposure.

References

- Altarriba, J., Bauer, L. M., & Benvenuto, C. (1999). Concreteness, context availability, and imageability ratings and word associations for abstract, concrete, and emotion words. *Behavior Research Methods*, 31(4), 578–602.
- Altarriba, J., Bauer, L. M. (2004). The distinctiveness of emotion concepts: A comparison between emotion, abstract, and concrete words. *The American Journal of Psychology*, 117(3), 389-410.
- Atkinson, D. (1987). The mother tongue in the classroom: An neglected resource? *ELT Journal*, 41(4), 241–247.
- Auerbach, E. R. (1993). Reexamining English only in the ESL classroom. *TESOL Quarterly*, 27(1), 9–32.
- Barsalou, L. W. (1999). Perceptual symbol systems. *Behavioral and Brain Sciences* 22(4), 577–660.
- Binder, J. R., Westbury, C. F., McKiernan, K. A., Possing, E. T., & Medler, D. A. (2005). Distinct brain systems for processing concrete and abstract concepts. *Journal of Cognitive Neuroscience* 17(6), 905–17.
- Butzkamm, W., & Caldwell, J. (2009). *The bilingual reform: A paradigm shift in foreign language teaching*. Tübingen: Narr Studienbücher.
- Canagarajah, A. S. (1995). Functions of code-switching in ESL classrooms: socializing bilingualism in Jaffna. *Journal of Multilingual and Multicultural Development*, 6(3), 173–195.
- Chambers, F. (1991). Promoting use of the target language in the classroom. *Language Learning Journal* 4(1), 27–31.
- Chaudron, C. (1988). *Second language classrooms: Research on teaching and learning*. Cambridge: Cambridge University Press.
- Connell, L., & Lynott, D. (2012). Strength of perceptual experience predicts word processing performance better than concreteness or imageability. *Cognition* 125(3), 452–65.

-
- Cobb, T. (2000). The Complete Lexical Tutor. Retrieved 23 December 2016, from [http:// www.lextutor.ca](http://www.lextutor.ca).
- Cook, J. (1991). *Linguistics and second language acquisition*. London: Macmillan.
- Cook, V. (1996). *Second language learning and language teaching* (2nd edition) London: Arnold
- Cook, V. (2001). Using the first language in the classroom. *Canadian Modern Language Review* 57(3), 402–423.
- Craik, F. I., & Lockhart, R. S. (1972). Levels of processing: a framework for memory research. *Journal of Verbal Learning and Verbal Behavior* 11(6), 671–84.
- Cummins, J. (2007). Rethinking monolingual instructional strategies in multilingual classrooms. *Canadian Journal of Applied Linguistics*, 10, 221–240.
- Dailey O’Cain, Jennifer & Grit Liebscher. (2009). Teacher and student use of the first language in foreign language classroom interaction: Functions and applications. In M. Turnbull & J. Dailey-O’Cain (Eds). *First language use in second and foreign language learning* (pp. 131-144). Bristol: Multilingual Matters.
- De Groot, A. M. B. (1989). Representation aspects of word image-ability and word frequency as assessed through word association. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15,824–845.
- De Groot, A. M. B. (1992a). Bilingual lexical representation: a closer look at conceptual representations. In R. Frost & L. Katz (Eds.), *Orthography, phonology, morphology, and meaning*. Amsterdam: Elsevier (pp. 389–412).
- De Groot, A. M. B. (1992b). Determinants of word translation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 18(5), 1001–18.
- De Groot, A. M. B. (1993). Word-type effects in bilingual processing tasks: support for mixed-representational system. In R. Schreuder & B. Weltens (Eds.), *The bilingual lexicon*. Amsterdam: John Benjamins (pp. 27–51).
- De Groot, A. M. B., Dannenburg, L., & Vanhell, J. G. (1994). Forward and backward word translation by bilinguals. *Journal of Memory and Language*, 33(5), 600-629.
- DeGroot, A. M. B., & Poot, R. (1997). Word translation at three levels of proficiency in a second language: The ubiquitous involvement of conceptual memory. *Language Learning*, 47, 215–264.
- De Groot, A. M. B., & Keijzer, R. (2000). What is hard to learn is easy to forget: The roles of word concreteness, cognate status, and word frequency in foreign language vocabulary learning and forgetting. *Language Learning*, 50, 1–56.
- De la Campa, J., & Nassaji, H. (2009). The amount, purpose, and reasons for using L1 in L2 classroom. *Foreign Language Annals*, 42(4), 742-759.
- Duff, P. A., & Polio, C. G. (1990). How much foreign language is there in the foreign language classroom? *The Modern Language Journal*, 74(2), 154–166.
- Dulay, H. C., & Burt, M. K. (1974). Natural sequences in child second language acquisition. *Language Learning Journal*, 24(1), 37–53.

- Duthie, J. k., Nippold, M. A., Billow, J. L., & Mansfield, T. C. (2008). Mental imagery of concrete proverbs: A developmental study of children, adolescents, and adults. *Applied Psycholinguistics*, 29(1) 151-173.
- Eldridge, J. (1996). Code-switching in a Turkish secondary school. *ELT Journal*, 50(4), 303-311.
- Ellis R. (1984). *Classroom second language development*. Oxford: Pergamon.
- Ellis, R. (1994). *The Study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, R. (1995). Modified oral input and the acquisition of word meanings. *Applied Linguistics*, 16(4), 409–41.
- Esfahani, F. R., & Kiyoumars, F. (2010). The effect of code switching on learning ESP contexts in Iranian EFL learners. *International Journal of Learning*, 17(7), 107-114.
- Fano, R. M., (1950). The information theory point of view in speech communication. *The Journal of the Acoustical Society of America*, 22(6),691-696.
- Fatemi, A. H., & Barani, G. (2014). The impact of teachers' code switching on the vocabulary learning of Iranian university EFL learners. *Journal of Language Sciences & Linguistics*. 2(4), 91-98.
- Ferguson, G. (2003). Classroom code-switching in post-colonial contexts: functions, attitudes and policies. *AIL A Review*, 16(38),38-51.
- Fliessbach, K., Weis, S., Klaver, P., Elger, C., & Weber, B. (2006). The effect of word concreteness on recognition memory. *Neuroimage*, 32(3), 1413–21.
- Franklin, C. E. M. (1990). Teaching in the target language: Problems and prospects. *Language Learning Journal*, 2(1), 20-24.
- Gearon, M. (2006). L'alternance codique chez les professeurs de français langue étrangère pendant des leçons orientées vers le développement des connaissances grammaticales. *Canadian Modern Language Review*, 62, 449–467.
- Gass, S. M. (1988). Integrating research areas: a framework for second language studies. *Applied Linguistics*, 9(2), 198–217.
- Gass, S. M. (1997). *Input, interaction, and the second language learner*. Mahwah, NJ: Lawrence Erlbaum.
- Ghorbani, A. (2011, October). First language use in foreign language classroom discourse. Paper presented at the *International Conference on Education and Educational Psychology (ICEEPSY 2011)*, Istanbul, Turkey.
- Gronin, R., Lupker, S. J., & McRae, K. (2009). Shared features dominate semantic richness effects for concrete concepts. *Journal of Memory and Language*, 60, 1–19.
- Hadadi, A., Abbasi, H., & Goodarzi, A. (2014). How L1 influence changes with regard to L2 proficiency increase. *Procedia - Social and Behavioral Sciences*, 98, 614 – 617

-
- Hashemi, S. M., & Sabet, M. K. (2013). The Iranian EFL students' and teachers' perception of using Persian in general English classes. *International Journal of Applied Linguistics & English Literature*, 2(2), 2200-3592.
- Haugen E, (1956). *Bilingualism in the Americas: A bibliography and research guide*. Montgomery: University of Alabama Press.
- Hennebry, M., Rogers, V., Macaro, E., & Murphy, V. (2013). Direct teaching of vocabulary after listening: Is it worth the effort and what method is best? *The Language Learning Journal*, 1-19.
- Hisham A, B., & Jusoff, K. (2009). Teachers' code-switching in classroom instruction for low English proficient learners. *English Language Teaching*, 2(2), 49-55.
- Jakobson, R. (1953). Results of a joint conference of anthropologists and linguists. *International Journal of American Linguistics*, 19(2), 11-21.
- Jiang, N. (2000). Lexical representation and development in a second language. *Applied Linguistics*, 21(1), 47-77.
- Jiang, N. (2004). Semantic transfer and its implications for vocabulary teaching in a second language. *The Modern Language Journal*, 88(3), 416-32.
- Jingxia, L. (2009). Switching to L1 in the EFL classroom-the perspective of adaptation. *The Open Applied Linguistics Journal*, 2, 45-49.
- Kaneko, T. (1992). *The role of the first language in foreign language classrooms*. (Unpublished doctoral dissertation). Temple University, Philadelphia, PA.
- Kang, Dae-Min. 2008. The classroom language use of a Korean elementary school EFL teacher: Another look at TETE. *System*, 36, 214-226.
- Kaushanskaya, M., & Rehtzigel, K. (2012). What can errors tell us about differences between monolingual and bilingual word learning? *Psychonomic Bulletin & Review*, 19(5), 935-941.
- Krashen, S. D., & Terrell, T. D. (1983). *The natural approach: Language acquisition in the classroom*. London: Prentice Hall Europe.
- Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. New York: Addison-Wesley Longman Ltd.
- Kroll, J. F., & Stewart, E. (1994). Category interference in translation and picture naming: evidence for asymmetric connections between bilingual memory representations. *Journal of Memory and Language* 33(2), 149-74.
- Laufer, B. (1989). A factor of difficulty in vocabulary learning: Deceptive transparency. *AILA Review* 6(1), 10-20.
- Lee, J. H., & Macaro, E. (2013). Investigating age in the use of L1 or English-only instruction: vocabulary acquisition by Korean EFL learners. *The Modern Language Journal* 97(4), 887-901.
- Levine, G. S., (2003). Student and instructor beliefs and attitudes about target language use, first language use, and anxiety: Report of a questionnaire study. *Modern Language Journal*, 87, 343-364.
- Levine, Glenn S. (2011). *Code choice in the language classroom*. Bristol, UK: Multilingual Matters.

-
- Lightbown, P. (1991). What have we here? Some observations on the effect of instruction on L2 learning. In R. Phillipson, E. Kellerman, L. Selinker, M. Sharwood-Smith, & M. Swain (Eds.), *Foreign/second language pedagogy research* (pp.197–212). Clevedon, Avon: Multilingual Matters.
- Lightbown, P. M., (2001). L2 Instruction: time to teach. *TESOL Quarterly*, 35, 598-99.
- Lin, A. (2013). Classroom code-switching: three decades of research. *Applied Linguistics Review*, 4(1), 195–218.
- Liu, D., Ahn, Gil-Soon, Baek, Kyung-Suk & Han, Nan-OK. (2004). South Korean high school English teachers' code switching: Questions and challenges in the drive for maximal use of English in teaching. *TESOL Quarterly*, 38(4), 605-638.
- Littlewood, W., & Yu, B. (2011). First language and target language in the foreign language classroom. *Language Teaching*, 44, 64–77.
- Liu, J. (2008). L1 use in L2 vocabulary learning: Facilitator or barrier. *International Education Studies*, 1(2), 65-69.
- Lo, Y. Y., & Macaro, E. (2012). The medium of instruction and classroom interaction: evidence from Hong Kong secondary schools, *International Journal of Bilingual Education and Bilingualism*, 15(1), 29-52.
- Long, M. H. (1983). Native speaker/non-native speaker conversation in the second language classroom. In M. Clarke, & J. Handscombe (Eds.), *On TESOL, 82: Pacific perspectives on language and teaching* (pp. 207-225). Washington, DC: TESOL
- Long, M. H. (1983a). Linguistic and conversational adjustment to non-native speakers. *Studies in Second Language Acquisition*, 5(2), 177–93.
- Long, M. H. (1983b). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, 4(2), 126–41.
- Loschky, L. (1994). Comprehensible input and second language acquisition. *Studies in Second Language Acquisition*, 16(3), 303–23.
- Macaro, E. (2001). Analysing student teachers' code switching in foreign language classrooms: Theories and decision making. *The Modern Language Journal*, 85(4), 531–48.
- Macaro, E. (2009). Teacher use of code switching in the second language classroom: Exploring 'optimal' use. In Miles Turnbull & J. Dailey-O'Cain (eds). *First language use in second and Foreign Language Learning*. Bristol: Multilingual Matters.
- Mattioli, G. (2004). On native language intrusions and making do with words: Linguistically homogeneous classrooms and native language use. *English Teaching Forum*, 42(4), 20-25.
- Mirhasani, A., & Jafarpour-Mamaghani, H. (2009). Code switching and Iranian EFL Learners' oral proficiency. *Journal of Teaching English as a Foreign Language and Literature*, 1(2), 21-31.

- Moghadam, S. H., Samad, A. A., & Shahraki, E. R. (2012). Code switching as a medium of instruction in an EFL classroom. *Theory and Practice in Language Studies, London*, 2 (11), 2219-2225.
- Momenian, M., Samar, R. G. (2011). Functions of CS among Iranian advanced and elementary teachers and students. *Educational Research and Reviews*, 6(13), 769-777.
- Moradkhani, S. (2012). The typology of EFL teachers' code switching: A validation study. *The Journal of Teaching Language Skills*, 4(3), 103-126.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Nation, P. (2003). The role of the first language in foreign language learning. *The Asian EFL Journal*, 5(2).
- Nation, I. S. P. (2006). How large a vocabulary is needed for reading and listening? *The Canadian Modern Language Review/La Revue Canadienne des langues vivantes*, 63(1), 59-82.
- Nation, P., & Beglar, D. (2007). A vocabulary size test. *The Language Teacher*, 31(7), 76-87. Retrieved December 9, from http://jalt-publications.org/tlt/issues/2007-07_31.7
- Nazary, M. (2008). The role of L1 in L2 acquisition: Attitudes of Iranian university students. *Novitas-Royal*, 2 (2), 138-153. Retrieved November 4, 2016 from <http://novitasroyal.org/nazary.pdf>
- Noorbar, S., & Mamaghani, J. (2016). The effect of code switching on Iranian elementary EFL learners' oral fluency, accuracy, and willingness to communicate. *English Language Teaching*, 3(4), 75-103.
- Paivio, A., & Desrochers, A. (1980). A dual coding approach to bilingual memory. *Canadian Journal of Psychology*, 34, 388-399.
- Paivio, A. (1986). *Mental representations: a dual coding approach*. New York: Oxford University Press.
- Paribakht, T. S., & Wesche, M. B. (1993). Reading comprehension and second language development in a comprehension-based ESL program. *TESL Canada Journal*, 11(1), 9-29.
- Paribakht, T. S., & Wesche, M. B. (2000). Reading-based exercises in second language vocabulary learning: An introspective study. *The Modern Language Journal*, 84(2), 196-213.
- Phillipson, R. (1992). *Linguistic imperialism*. Oxford: Oxford University Press.
- Polio, C. G., & Duff, P. A. (1994). Teachers' language use in university foreign language classrooms: A qualitative analysis of English and target language alternation. *The Modern Language Journal*, 78(3), 313-336.
- Qian, X., Tian, G., & Wang, Q. (2009). Code-switching in the primary EFL classroom in China: two case studies. *System*, 37, 719-730.
- Rabbidge, M., & Chapell, P. (2014). Exploring non-native English-speaking teachers' classroom language use in South Korean elementary schools. *TESL-EJ*, 17(4), 1-18.

- Rahimi, A., & Eftekhari, M. (2011). Psycholinguistic code switching in Iranian university classroom context. *The Journal of Language Teaching and Learning, 1*, 54-63.
- Rahimi, A., & Jafari, Z. (2011). Iranian students' attitudes towards the facilitative and debilitating role of code-switching; types and moments of code-switching at EFL classroom. *The Buckingham Journal of Language and Linguistics, 4*. 15-28.
- Rahimi, F., & Kiyoumars, F. (2010). The effect of code switching on learning ESP contexts in Iranian EFL learners. *The International Journal of Learning, 17*(7), 139-150.
- Ramachandran, S. D., & Rahim, H. A. (2004). Meaning recall and retention: The impact of the translation method on elementary level learners' vocabulary learning. *RELC Journal, 35*(2), 161-178.
- Read, J. (1993). The development of a new measure of L2 vocabulary knowledge. *Language Testing 10*(3), 355-71.
- Read, J. (1998). Validating a test to measure depth of vocabulary knowledge. In A. Kunnan (Ed.), *Validation in language assessment* (pp. 41-60). Mahwah, NJ: Lawrence Erlbaum.
- Rezvani, E., & Rasekh, A. (2011). Code-switching in Iranian elementary EFL classrooms: An exploratory investigation. *English Language Teaching, 4*(1), 18-25.
- Rivera, K. (1990). Developing native language literacy in language minority adult learners. *ERIC Digest*. Retrieved November 20, from <http://www.ericdigests.org/1993/native.htm>.
- Rivers, D. J. (2011). Politics without pedagogy: questioning linguistic exclusion. *ELT Journal, 65*(2), 103-113.
- Rolin-Ianziti, J., & Brownlie, S. (2002). Teacher use of learners' native language in the foreign language classroom. *The Canadian Modern Language Review, 58*(3), 402-426.
- Samani, S. K., & Narafshan, M. H. (2016). Students' Strategic Reactions to the Role of Native Language as a Medium of Instruction in English Classrooms. *Journal of Language Teaching and Research, 7*(4), 716-723.
- Samar, R., & Moradkhani, S. (2014). Code switching in the Language Classroom: A Study of Four EFL Teachers' cognition. *RELC Journal, 45*(2), 151- 164.
- Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics, 11*(2), 129-58.
- Schmitt, N., & McCarthy, M. (1997). *Vocabulary: Description, Acquisition and Pedagogy*. Cambridge University Press.
- Schwanenflugel, P. J., & Shoben, E. J. (1983). Differential context effects in the comprehension of abstract and concrete verbal materials. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 9*(1), 82-102.
- Schwanenflugel, P. L., Akin, C., & Luh, WM. (1992). Context availability and the recall of abstract and concrete words. *Memory and Cognition, 20*(1), 96-104.

-
- Shamash, Y. (1990). Learning in translation: Beyond language experience in ESL. *Voices*, 2(2), 71–75.
- Schwanenflugel, P. J., Harnishfeger, K. K., & Stowe, R.W. (1988). Context availability and lexical decisions for abstract and concrete words. *Journal of Memory and Language*, 27(5), 499–520.
- Schweers, W. C. Jr. (1999). Using L1 in the L2 classroom. *English Teaching Forum*, 37(2), 6-13.
- Seidenberg, M. S., & Zevin, J. D. (2006). Connectionist models in developmental cognitive neuroscience: critical periods and the paradox of success. In Y. Munakata & M. Johnson (Eds.), *Attention and performance XXI: Processes of change in brain and cognitive development*. Oxford: Oxford University Press, 585–612.
- Shuchi, I. J., & Islam, A. B. M. S. (2016). Teachers' and students' attitudes towards L1 use in EFL classrooms in the contexts of Bangladesh and Saudi Arabia. *English Language Teaching*, 9(12), 916-4742.
- Simin, S., Teimouri, F., Kasmaee, H., & Rezaei, S. (2005). *The role and the effects of code-switching in material learning*. The first national conference on research in teaching English, translation, and linguistics. Islamic Azad University, Khorasgan Branch, Isfahan, Iran.
- Sökmen, J. A. (1997). Current trends in teaching second language vocabulary. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary acquisition and pedagogy* (pp. 237-257). Cambridge: Cambridge University Press.
- Sonbul, S., & Schmitt, N. (2010). Direct teaching of vocabulary after reading: is it worth the effort? *English Language Teaching Journal*, 64(3), 253–260.
- Swain, M., & Lapkin, S. (2000). Task-based second language learning: The uses of the first language. *Language Teaching Research*, 4(3), 251-270.
- Tang, J. (2002). Using L1 in the English classroom. *English Teaching Forum*, 40(1), 36-43.
- Tian, L., & Macaro, E., 2012. Comparing the effect of teacher code switching with English-only explanations on the vocabulary acquisition of Chinese university students: A lexical focus-on-form study. *Language Teaching Research*, 16(3), 367–391.
- Tian, L. (2014). Code switching in two Chinese universities. In R. Barnard, & J. McLellan (Eds.), *Code switching in university English-medium classes: Asian perspectives* (pp. 43-53). Bristol, England: Multilingual Matters.
- The British National Corpus*. (2007). Distributed by Oxford University Computing Services on behalf of the BNC Consortium (version3) [BNCXMLEdition]. Retrieved October 5, 2016, from <http://www.natcorp.ox.ac.uk/>
- Tian, L., & Macaro, E. (2012). Comparing the effect of teacher codeswitching with English-only explanations on the vocabulary acquisition of Chinese university level students. *Language Teaching Research* 16(3), 367–91.

-
- Tokowicz, N., & Kroll, J. F. (2007). Number of meanings and concreteness: Consequences of ambiguity within and across languages. *Language and Cognitive Process*, 22, 727–779.
- Turnbull, M. (2000). *Analyses of core French teachers' language use: a summary*. In *Proceedings of bilingual child, global citizen colloquium*. Fredericton, New Brunswick: University of New Brunswick.
- Turnbull, M. (2001). There is a role for the L1 in second and foreign language teaching, but.... *Canadian Modern Language Review*, 57, 531–540.
- Turnbull, M., & Arnett, K. (2002). Teachers' uses of the target and first languages in second and foreign language classrooms. *Annual Review of Applied Linguistics*, 22, 204–218.
- VanHell, J. G., & DeGroot, A. M. B. (1998). Conceptual representation in bilingual memory: Effects of concreteness and cognate status in word association. *Bilingualism: Language and Cognition*, 1, 193–211.
- Vogt, H. (1954). Language contacts. *Word*, 10(2-3), 365-374.
- Waring, R., & Nation, I. S. P. (2004). Second language reading and incidental vocabulary learning. *Angels on the English-Speaking World*, 4, 97-110.
- Weinreich U, (1953). *Languages in contact*. The Hauge: Mouton.
- Wells, G. (1999). Using the L1 to master L2: A response to Antón and DiCamilla's 'Socio-cognitive functions of L1 collaboration interaction in the L2 classroom'. *Modern Language Journal*, 83(2), 248-54.
- Wittgenstein, L. (2009). *Philosophical investigations* (4th edition.). Malden, MA: Wiley-Blackwell.
- Wong-Fillmore L. (1985). When does teacher talk work as input? In Gass, S. M., Madden, C. G., (Eds). *Input in second language acquisition*. Rowley, MA: Newbury.
- Zhao, T., & Macaro, E. (2016). What works better for the learning of concrete and abstract words: teachers' L1 use or L2-only explanations? *International Journal of Applied Linguistics*, 26 (1), 75-98.

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Appendix 1

Examples of Lexical Information Provided Through Teachers' L1 use and L2-only Explanations

Coast (n)

L1 use: ساحل

L2-only: the land next to or close to the sea.

Luxury (n)

L1 use: تجمل

L2-only: great comfort, especially as provided by expensive and beautiful things

Precaution (n)

L1 use: احتياط

L2-only: an action which is done to prevent something unpleasant or dangerous happening.

Hybrid (n)

L1 use: پيوندی

L2-only: a plant or animal that has been produced from two different types of plant or animal, especially to get better characteristics, or anything that is a mixture of two very different things.

Appendix 2

Example of a Reading Text with the Target Words Underlined

Imagine a beach; a quiet place, with only the noise of the sea and the gulls in the background. There are boats floating near the shore and a few people swimming in the water next to them. It's a hot day, and there are some people lying on the sand enjoying the sunshine and slowly going brown. There are no shops, no people making noises, no loud music, everything is peaceful. There is just the sea, the sun, and the beach; a little paradise.

For a child a beach is a wonderful place. Here I found lots of space to run and play on the sand or to swim in the water. Being a campsite there were always lots of other families with children to play with. Another of my favorite activities was climbing on the rocks and cliffs around the beach. Rock pools were very educational places where I used to study the little fish and sea animals.

Although the sea can be beautiful, this beach is sometimes a dangerous place to be. When the weather is bad there are often storms with strong winds. When this happens, the waves can get up to 2-3 meters high – definitely not weather for swimming. Every year some of the boats anchored on the beach are lost because the sea is so rough. I remember holding down our tent to stop the wind blowing it away on many occasions! However, if the waves weren't too high all the children (and some adults) used to go swimming in life jackets, as it was very exciting.

Appendix 3

Target Words Used in the Present Study

Concrete ◦				Abstract ◦			
anchor ◦	explosives	life Jacket ◦	rock pool ◦	achievement ◦	environment	luxury ◦	rib-tickler
campsite ◦	galaxies ◦	locomotive	sanctuary ◦	authority ◦	excitement ◦	Measurement	Spell ◦
Sprinkler ◦	gulls ◦	magician ◦	slalom ◦	black joke ◦	exhilarating	Paradox ◦	spread ◦
canopy ◦	herb ◦	magnet ◦	steam engine ◦	ceremony ◦	fascination ◦	Patronage ◦	survival ◦
cliff ◦	heroine ◦	passageway	wagons ◦	common sense ◦	fertility ◦	persecution ◦	taboo ◦
coast ◦	household	play ◦	warlock ◦	community ◦	harm ◦	precaution ◦	taste ◦
coral reef ◦	humidity ◦	potion ◦	water sports	competition ◦	honor ◦	recognition ◦	temporary
crucible ◦	hybrid ◦	rainforest ◦	wetsuit ◦	controversy ◦	invention ◦	revolution ◦	treatment
enchantress	illusionist	refuge ◦	wizard ◦	entertainment	light year ◦	reward ◦	theory ◦

Appendix 4

Format of Simplified RVKS Test

Instruction: If you know what a word means, please use Persian or English to fill in the blank. If you do not know its exact meaning, please choose the category that relates to the word from *A*, *B*, *C*, and *D*. If you do not know what a word means, please fill in the blank with *E*.

1. Wersuit _____ A. Money B. Clothes C. Food D. Goods
2. Gull _____ A. Animal B. Appearance C. Money D. Sound
3. Cliff _____ A. Location B. Weather C. Sports D. Technology
4. Magician _____ A. People B. Food C. Language D. Feeling
5. Fertility _____ A. Time B. Location C. Feeling D. Quality
6. Excitement _____ A. Feeling B. Plant C. Goods D. Behavior
7. Revolution _____ A. Concept B. Feeling C. Crime D. Technology
8. Black joke _____ A. Concept B. Transport C. Feeling D. Art