Form-focused Instruction in Second Language Vocabulary Learning: A Case for Contrastive Analysis and Translation

BATIA LAUFER and NANY GIRSAI
University of Haifa

The study investigates the effect of explicit contrastive analysis and translation activities on the incidental acquisition of single words and collocations. We compared three high school groups of learners of the same L1 and comparable L2 (English) proficiency. Each group represented one instructional condition: meaning focused instruction (MFI), non-contrastive form-focused instruction (FFI), and contrastive analysis and translation (CAT). The target items consisted of ten unfamiliar words and ten collocations in L2—English. The MFI group performed content-oriented tasks which did not require attention to the target items. The FFI group performed text-based vocabulary tasks which focused on the target items. The CAT group was assigned text-based translation tasks: from L2 into L1, and from L1 into L2. During the correction stage, the teacher provided a contrastive analysis of the target items and their L1 translation options. Time-on-task was kept constant in the three groups. After completing the tasks, the three groups were tested on the retention of the target items by two tests: active recall and passive recall. A week later, the participants received the same tests. The CAT (contrastive analysis and translation) group significantly outperformed the other two groups on all the tests. These superior results are discussed in light of the ‘noticing’ hypothesis, ‘pushed output’, ‘task-induced involvement load’, and the influence that L1 exerts on the acquisition of L2 vocabulary.

INTRODUCTION

The pedagogical approach of form-focused instruction to second language teaching can be regarded as a modification of communicative language teaching, whose proponents believed that comprehensible input and meaning-oriented tasks were necessary and sufficient for language acquisition. When it became evident that second language learners could not achieve high levels of grammatical competence from entirely meaning-centred instruction (Swain 1988; Lyster 1994; Lightbown and Spada 1999), applied linguists suggested that learners should also attend to form (Long 1991; De Keyser 1998; Norris and Ortega 2000; Ellis 2001; Housen and Pierrard 2005). The term ‘form’ includes the function that a particular structure performs. For example,
attention to the ‘form’-ed subsumes the realization that -ed signals an action performed in the past.

Form-focused instruction, henceforth FFI, can be of two types: Focus on Form (FonF) and Focus on Forms (FonFs). The first is a pedagogical approach defined by Long as drawing learners’ attention to linguistic elements during a communicative activity. Focus on Forms, on the other hand, is an approach equated with the ‘traditional’ method, which entails teaching discrete linguistic structures in separate lessons in a sequence determined by syllabus writers. According to Ellis (2001), in a FonFs approach, students view themselves as learners of a language and the language as the object of study; in FonF, on the other hand, learners view themselves as language users and language is viewed as a tool for communication. The notion of FFI was developed in the context of grammar learning, but it can be extended to vocabulary as well.

Thus, learners’ attention can be drawn to lexical items (single words and multi-word units) within a communicative task environment if these lexical items are necessary for the completion of a communicative, or an authentic language task.

For example, when reading a text, or engaging in a group discussion, learners may come across unfamiliar words and look them up in a dictionary. This activity constitutes Focus on Form since the words attended to are necessary tools for task completion. Conversely, learners’ attention can be drawn to words in non-communicative, non-authentic language tasks, as in the case of matching words that were taught and are listed in column A to their definitions in column B, or filling in these words in given sentences, one word in each sentence. These are examples of FonFs in the sense that they entail teaching and practising discrete lexical items, which are treated as the objects of study and not as tools of language use.

Empirical research of form-focused instruction has also been conducted mainly in the context of the teaching of grammar, not vocabulary. Only recently has FFI been explicitly linked to vocabulary instruction (Hill and Laufer 2003; Laufer 2005, 2006; Peters 2006). However, many earlier studies that examined the usefulness of various instructional techniques on vocabulary learning (dictionary use, negotiation of meaning in the input or output, writing original sentences, computerized exercises, etc.) investigated, in fact, the effect of FFI in its own right, or in comparison with meaning-based approaches thus providing indirect empirical support for the efficacy of FFI for lexical learning. For example, Luppesku and Day (1993) and Knight (1994) studied the incidental acquisition of new words, that is the acquisition of words without learners’ deliberate attempts to commit them to memory. They compared students who read a text and looked up unknown words in the dictionary with students who read the text without a dictionary. The dictionary condition fared better than the reading only condition. Ellis et al. (1994) found that interactionally modified input, that is input that included clarifications, was more beneficial for learning new words than pre-modified input (input prepared on the basis of prior student interaction before the experimental task).
De la Fuente (2002) found that learners exposed to input during negotiated interaction with or without production of pushed output learnt more words than learners exposed to non-negotiated input. The FFI conditions in the above examples could be classified as Focus on Form since they entailed attention to vocabulary during communicative tasks. For additional examples of FonF studies, see Hulstijn (1992), Newton (1993), Ellis and He (1999), and Watanabe (1997).

There are numerous examples of studies that could be classified as Focus on Forms studies, where vocabulary was practised in isolation, or in minimal context. We will briefly describe two. Snellings et al. (2002) increased learners’ word retrieval speed through four types of exercises: sentence completion, a decision about which of two supplied words make a given sentence incorrect, a decision about which word will correct a given sentence, and a translation of a Dutch word into English within an English sentence context. Horst et al. (2005) investigated vocabulary learning through the use of word banks, on-line dictionaries, concordances, cloze exercises, hypertexts, and self-quizzes. The two studies found that many of the practised words were learnt both receptively and productively. For additional examples of studies that include at least one FonFs condition, see Prince (1996), Qian (1996), Paribakht and Wesche (1997), Zimmerman (1997), Groot (2000), Kitajima (2001), Boers et al. (2004), Mondria and Wiersma, (2004), and Webb (2005, 2007).

The evidence for the effectiveness of FFI in vocabulary is indirect since the studies mentioned above were not designed to specifically contrast FFI and non-FFI conditions. Nor did the authors intend to specifically advocate decontextualized vocabulary learning of FonFs type. And yet, the overall conclusion of the studies is unambiguous: form-focused instruction, both of FonF and FonFs kinds, is beneficial to vocabulary learning. The results (in terms of the number of words retained after the FFI task) are usually superior to non-FFI conditions in comparative studies. In non-comparative studies, on average, two-thirds of the meanings of new words are recalled or recognized correctly on the post-tests (for a survey of FFI vocabulary studies, see Laufer 2005).

The vocabulary studies mentioned above employ a variety of means to focus on the words targeted for learning: glosses, dictionary use, negotiation of meaning, vocabulary exercises involving comprehension or production of words, and computer assisted learning devices (hypertexts, concordances, on-line dictionaries). To our knowledge, no research has examined the value of contrastive FFI of vocabulary, such as interlingual comparisons with learners’ L1, or translation. By contrastive FFI, we do not refer to bilingual glosses which simply state the meaning of L2 words, but to the kind of instruction which leads to learners’ understanding of the similarities and differences between their L1 and L2 in terms of individual words and the overall lexical system. For example, in the case of French as L2, a bilingual gloss would translate the French word ‘savoir’ as ‘know’. Teachers using contrastive FFI, on the other hand, would point out that ‘savoir’ and ‘know’ do not overlap semantically and would provide explanation and practice of the difference between the two French
translations of ‘know’: ‘savoir’ and ‘connaitre’. Lack of contrastive FFI studies is rather surprising. With the growth of interest in transfer studies and cross-linguistic influence since the 1980s (e.g. Gass and Selinker 1983; Odlin 1989), we could have expected to see an increased interest in researching the connection between overcoming learning difficulties and heightening the learners’ awareness to the differences between L1 and L2 that were causing them. Moreover, since providing cross-linguistic information is a clear case of focus on form, or forms (depending on whether it is provided within a communicative task, or not), it seems natural that FFI research should extend to cross-linguistic instruction. Such research has been conducted in the area of grammar. The results showed that providing learners with cross-linguistic information proves to be effective in the instruction of some selected structures (Kupferberg and Olshtain 1996; Sheen 1996; Kupferberg 1999; Ammar and Lightbown 2005).

We hypothesize that, similarly to grammar, L2 vocabulary teaching will benefit from cross-linguistic form-focused instruction which entails comparison with L1 and translation. Such an approach to vocabulary teaching can be justified in terms of several hypotheses that explain effectiveness in L2 learning in general: ‘noticing’, ‘pushed output’, and ‘task-induced involvement load’. It can also be justified by work in contrastive semantics, psycholinguistics, error analysis, and corpus analyses of learner language, work that demonstrates the pervasive influence of L1 on L2 vocabulary learning.

The ‘noticing’ hypothesis, which provided the theoretical underpinning of FFI, states that learners must consciously notice forms and the meanings these forms realize in the input in order to convert input into intake for learning (Schmidt 1990, 1994). Schmidt (2001) defines ‘noticing’ as the subjective correlate of what psychologists call attention, and concludes, on the basis of psychological literature, that although there may be some forms of learning without attention, in general, intentionally focused attention may be a practical necessity for successful language learning. Since many features of L2 input are likely to be infrequent, non-salient, and communicatively redundant, they may go unnoticed unless attention is drawn to them.

According to Robinson (1995), noticing entails detecting and then rehearsing the linguistic feature in short-term memory before storing it in long-term memory.

One way to make a foreign language feature noticeable or salient in the input is to enhance it by providing contrastive association with the corresponding L1 item. Such associations are the essence of explicit contrastive instruction. As mentioned earlier, empirical evidence can be found for the effectiveness of this approach in grammar. Since vocabulary can be enhanced in the same way, we can expect a similar beneficial influence of contrastive FFI on vocabulary learning.

The ‘pushed output’ hypothesis claims that when learners produce language and stretch their linguistic resources in the process, they improve their language production and their language development (Swain 1985;
Swain and Lapkin 1995). There is empirical evidence that output tasks have been more effective than input tasks for learning new words (Ellis and He 1999; De la Fuente 2002). Translation into L2 is a manifestation of pushed output. In order to translate, the learner is required to produce language, but unlike in the case of free production, the learner cannot produce a good translation if s/he avoids problematic words or structures. Hence, translation should be at least as effective as other pushed output tasks for learning vocabulary.

The ‘task-induced involvement load’ hypothesis (Laufer and Hulstijn 2001) postulates that the learning of words is best achieved by means of tasks with a high involvement load, that is tasks which combine three elements with regard to the words being practiced: ‘need’, ‘search’, and ‘evaluation’. The ‘need’ component is the motivational dimension of involvement. Search and evaluation are the two cognitive dimensions of involvement. ‘Need’ is present in the task when the word is perceived as necessary for task completion. ‘Search’ is the attempt to find the meaning of an unknown L2 word or, conversely, to find the L2 word form expressing a given concept. Examples of ‘search’ are: trying to find the L2 translation of an L1 word by consulting a dictionary, or trying to infer the meaning of an L2 word from context. ‘Evaluation’ implies some kind of selective decision about the word’s meaning, or form, in which the word’s context is taken into account. It entails a comparison of a given word with other words, a specific meaning of a word with its other meanings, or comparing the word with other words in order to assess whether a word does or does not fit its context. Two degrees of prominence have been suggested for ‘evaluation’: moderate and strong. A ‘moderate evaluation’ entails recognizing differences between words (as in a fill-in task with words provided in a list), or differences between several senses of a word in a given context (as in the decision of the meaning of a homonym in a particular text context). ‘Strong evaluation’ requires a decision as to how additional words will combine with the new word in an original, as opposed to given, L2 sentence. The involvement hypothesis was proposed as an attempt to operationalize the concepts that have been used in connection with good retention: depth of processing, degree of elaboration, quality of attention, richness of encoding (see, for example, Craik and Lockhart 1972; Baddeley 1997). Empirical evidence was found to support the involvement load hypothesis fully, or partially (Laufer and Hulstijn 2001; Hill and Laufer 2003; Webb 2005). Translation tasks embody the element of need since the words that have to be understood (when translating into L1), or produced (when translating into L2) are predetermined by the source text. The element of search is present as well. If an L2 word is unfamiliar, learners have to conduct a search for its meaning when translating into L1, or a search for its form when translating into L2. Most importantly, an element of evaluation is necessary to carry out a translation activity. There is usually more than one translation alternative for a given sentence. Therefore, when translating, learners have to make a decision as to how each alternative fits the text they create. When the
translation is into L2, this decision will be based on the way other words in L2 combine with the new word. Hence, according to the model of involvement, the evaluation is strong. Since translation is a task with a high involvement load, it can be assumed that it will be effective in vocabulary learning.

Additional justification for incorporating translation tasks into vocabulary learning is provided by earlier research in contrastive semantics and error analysis, and later corpus studies and psycholinguistic experiments. Dagut (1977) suggested that learners do not attach new L2 words directly to the concepts that they represent, but to L1 words which represent L1 concepts that learners possess. A similar view was expressed by Blum and Levenston (1978), Ringbom (1983), and later by Ellis (1997), Hall (2002), and Jiang (2004). Sometimes L1 concepts are identical to the concepts represented by the new L2 words, resulting in a correct translation of the learner. However, since different languages do not have entirely identical conceptual systems, many L2 words based on L1 meanings may not be identical in all semantic properties, that is have no exact translation equivalents. For example, even though ‘home’ is translated as ‘maison’ in French, the two are not totally equivalent since ‘home’ has a specific feature of comfort and safety (as opposed to ‘house’) and this feature is not obvious in the French translation. In order to use the L2 word with its correct specifications, a process of semantic restructuring must occur in which the learner readjusts the semantic knowledge of the word that s/he possesses to that of the native speaker.

Wolter (2001, 2006) extends the idea of relating L2 words to L1 concepts to the issue of lexical combinations. He suggests that learners draw upon L1 conceptual knowledge when making assumptions about connections between L2 words and that this knowledge will sometimes provide learners with misinformation about allowable combinations of L2 words. Thus, a learner who produces unusual collocations or combinations of words in the L2 is probably relying too heavily on L1 collocational knowledge. Collocational errors can occur even when learners are familiar with both of the words that comprise the correct collocation. Wolter gives an example of the Japanese learner who produces the collocation narrow room even though s/he knows the word small. Learning to connect words correctly requires restructuring of the existing network. Since word combinations cannot be easily predicted from the knowledge of individual words, the task of second language vocabulary learning is even greater than was thought when vocabulary was considered in terms of single words (Lewis 2000).

It may be argued that semantic restructuring of single concepts and lexical networks may occur with continued exposure to L2 vocabulary in a variety of contexts. Even if we agree to this position, an important question is whether a foreign language classroom can provide enough exposure to L2 lexis for such restructuring to take place. Judging by the available empirical evidence on learner lexis, it is doubtful whether this is the case. Early error analysis studies showed that lexical errors resulting from L1 influence persisted with advanced learners, particularly where the concepts in L1 and
L2 did not overlap (Myint Su 1971; Laforest 1980; Ringbom 1982). Recent psycholinguistic studies confirmed this finding. Jiang (2002, 2004) found that advanced Chinese learners of English had difficulty distinguishing between pairs of English words that were translated by a single Chinese word, for example criterion-standard, accurate-precise, safe-secure, etc. He concluded that the semantic restructuring that is necessary for acquiring the meaning of words different from L1 is a slow process, which is relatively unaffected by the quantity of input that L2 learners receive in their learning context.

Collocational errors persist in the learner language as well, thus showing resistance to language input and teaching. When encountered in the input, collocations are usually semantically transparent, for example make a decision, send a message, offer help, submit an application, hand in a paper, etc. Therefore they may not be noticed by learners and teachers as problematic. However, producing correct collocations is often difficult since ‘equivalent’ collocations in L1 may include at least one word which is different from L2. For example, English make a decision is lakaxat haxlata ‘take a decision’ in Hebrew; give examples is lehavi dugmaot ‘bring examples’, practice law is laasok be-mishpat ‘deal in law’. Biskup (1992) conducted an error elicitation study and found that advanced Polish-speaking learners of English made L1 based collocation errors. More recently, the same conclusion has been reached in a series of corpus studies (Bahns 1993; Granger 1998; Nesselhauf 2003, 2005). For example, Nesselhauf (2003) analysed the use of verb–noun collocations such as take a break or shake one’s head by advanced German-speaking learners of English in free written production and concluded that the learners’ L1 had a much stronger influence than earlier studies had predicted. Xiao and McEnery (2006) performed a cross-linguistic analysis of collocation, semantic prosody, and near synonymy, drawing upon data from English and Chinese. They concluded that teachers should compare the collocational behaviour in L1 and L2 since learners’ awareness of L1–L2 differences should considerably reduce the number of L1 interference errors.

The pervasive influence that L1 has on the learner lexis and the persistence of L1-based errors at advanced levels of learning suggest that contrastive form-focused instruction, which raises the learners’ awareness of the L1–L2 differences and provides practice in the areas of these differences, may prove more effective than teaching methods that ignore the cross linguistic influence on lexical learning.

We started investigating the effectiveness of contrastive FFI in a preliminary study (Laufer and Girsai 2008), where two groups of high school learners had been taught unfamiliar words and collocations in English as a foreign language. One group was exposed to the target items (the unfamiliar words and collocations) by reading a text and answering comprehension questions. Another group of the same L1 and the same English proficiency level read the text as well, but was also given two translation activities during which the target items were compared with their L1 equivalents. After the completion of the tasks, the two groups were tested on the retention of the target items by two
tests. The ‘reading + translation group’ outperformed the ‘reading group’ on both tests. In this study we did not include a group performing a non-contrastive form-focused activity. Hence, we could only conclude that contrastive FFI was superior to message-based instruction, but not that it was any different from FFI in general. The study in this paper was designed to find out whether this is the case.

THE STUDY

Having shown in our preliminary work that vocabulary teaching will benefit from cross-linguistic form-focused instruction, we now hypothesize that contrastive FFI will be at least as beneficial as, if not more than, other types of FFI for the learning of new vocabulary. To this effect, we set up three learning conditions for comparison:

1. MFI—message-focused instruction
2. FFI—non-contrastive form-focused instruction
3. CAT—contrastive analysis and translation

Detailed description of the conditions will be presented in the ‘procedure’ section.

Research questions

1) Will contrastive form-focused tasks lead to the acquisition of a significantly larger number of lexical items than non-contrastive form-focused tasks and than message-focused tasks?
   (a) in the case of single words;
   (b) in the case of collocations.

2) Will the above differences (if any) be retained on a delayed test taken one week after performing the first post-test?

Acquisition was operationalized as the ability to provide the form of the target words in response to their L1 translation equivalents (active recall), and the ability to provide the meaning of the target words (passive recall). Word knowledge consists of many components of knowledge: the word’s pronunciation, spelling, morphology, syntax, meaning, lexical relations, etc. (Nation 2001). Yet we contend that the most important component of word knowledge is the knowledge of the form–meaning relation, that is the ability to retrieve the meaning of a given word form, and the ability to retrieve the word form of a given concept. (For a justification of this position, see Laufer et al. 2004). This is why we chose to test recall of meaning and recall of form.

Each main research question was subdivided into four secondary questions, depending on the type of vocabulary items tested (single words or collocations) and depending on the type of knowledge elicited (passive recall or active
recall). Thus, each secondary question asked whether there would be a difference between the three conditions (MFI, FFI, CAT) regarding the following results:

1. the number of the single target words recalled passively;
2. the number of the single target words recalled actively;
3. the number of target collocations recalled passively;
4. the number of target collocations recalled actively.

Participants

Seventy-five 10th graders (aged 15–16) learning English as a foreign language participated in the experiment. They were Hebrew native speakers, who had studied English for six years prior to the experiment. Within the framework of the Israeli curriculum, such students are at the last stages of intermediate level. Native speakers of English, pupils who had lived abroad for a period of time, and students with learning disabilities were not included in the experiment. The participants studied in three parallel intact classes and were comparable in terms of proficiency in English. During their years of study, they followed the same curriculum prescribed by the Ministry of Education, had the same teachers, had been preparing for the same governmental exam and were all placed in the ‘5 point stream’ of English, that is the advanced stream of the Israeli curriculum. They were also from comparable socio-economic backgrounds. The teaching in these classes stresses communication, but occasional FonF happens as well. Teachers conduct the lessons in English and do not practise translation. Each class was randomly assigned to one condition: the message focused instruction (MFI) group, which consisted of 26 learners, the non-contrastive form-focused instruction (FFI) group, which had 23 participants, and the contrastive form-focused instruction (CAT) group, which comprised 26 learners.

Target items

The target vocabulary to be taught and tested included single words and collocations. Collocations were defined here as habitually occurring set semantic phrases. The target items were selected after pre-testing all the participants.

Selection and presentation of target items

Two weeks prior to the beginning of the treatment phase, two written pre-tests were administered to the groups during regular class time in order to determine whether the target vocabulary was indeed unknown to the participants. The tests consisted of 50 single words and 41 collocations. Some of these items were taken from reading material which we intended to use in the experiment. Others served as distracters. The distracters included
vocabulary which was supposed to be familiar to the learners as it had been previously taught. Each pre-test took about 10 minutes.

- **Pre-test 1** contained 50 single English words. The learners were asked to supply in writing the Hebrew translation for as many words as they knew.
- **Pre-test 2** was intended to check active collocational knowledge. The test consisted of 41 Hebrew phrases to be translated into English. Passive knowledge of collocations was not tested, because, as mentioned earlier in the Introduction, many collocations are semantically transparent and therefore easily comprehended. The particular difficulty associated with collocational knowledge lies in their production. For example, the meaning of *hit the headlines* would probably have been clear to many participants. However, in production, we often observed a word-for-word translation from Hebrew (*‘to break into headlines/titles’, for Hebrew ‘lifrotz la’kotarot’*). On the basis of these pre-tests, we selected 10 single words and 10 verb–noun collocations that were unknown to all the participants.

The single words were:

- Relish, glean, candid, laudable, opulent, plague, account, detractor, gregarious, lavish.

The collocations were:

- Settle scores, present a problem, derive pleasure, hold a vote, fulfil an ambition, launch a campaign, reclaim the trust, hit the headlines, meet the expectations, place orders.

The target vocabulary was embedded in a reading passage compiled by the second author and entitled ‘Clinton’s biography’. The text was based on six articles which dealt with Clinton’s book *My Life* and were available on the Internet. It consisted of 536 word tokens. The grammar of the text was kept simple in order to minimize grammar-related comprehension difficulties of the text. Moreover, the authors inserted textual clues into the text so that the meaning of the target words could be inferred from context without too much difficulty.

**Procedure**

The study adopted an incidental acquisition design, that is we investigated whether the target words and collocations were acquired without learners’ deliberate attempt to commit them to memory. Hence the learners were not told they were participating in an experiment at the end of which they would be tested. Each step of the study was conducted during regular class time and took the same amount of time in the three parallel classes that represented the three conditions.

The first stage of the treatment was identical in the three groups. They were asked to read the passage ‘Clinton’s biography’ and to answer
13 True-or-False text-based statements. The learners had no dictionaries and no marginal glosses for the unknown vocabulary. However, whenever a learner wanted to ask the meaning of a word, the teacher would provide the necessary information. When the exercise had been completed, the teacher went over the answers with the class. Each true or false statement was checked against the relevant section of the text and any questions or comments from the learners were addressed by the teacher. This activity took about 40 minutes. All the materials were collected at the end of the session.

The next stage of the study was conducted on the following day, during a double lesson (90 minutes). Each group received a different treatment, in accordance with the experimental condition it was assigned to. The treatment consisted of two tasks. The first one was performed with the text, which the learners received again, the second one without it. As in the first stage, the learners had no dictionaries and no marginal glosses for the unknown vocabulary. Whenever the new words were deemed necessary for a task by learners, they could infer them from context, or ask the teacher for the words’ meaning. Since the teacher went over all the answers in the three groups, the meaning of the target words used in the tasks was verified by her.

The MFI (meaning-focused instruction) group received two communicative tasks: reading comprehension and pair/group discussion. Here are two examples of reading comprehension questions:

1. Why is Arkansas mentioned in the text?
2. Complete the sentence:
   Although Clinton finally felt free, the affair ______________________

Upon completion of the exercise, the teacher went over the answer with the active participation of the learners. Then the texts were taken away once more and the discussion task followed. Here is one of the two discussion topics:

With your partner, discuss the following:
A president’s love affair is his own personal business and should not concern the public; it is a private matter between him and his wife and has nothing to do with his position as president.
Agree or disagree.

First, learners worked in pairs. The teacher would join a different pair each time to provide feedback. Following pair work, the entire group discussed the topic. During these activities, some of the target words may have been used by some learners. However, they were not singled out for teaching. The language of interaction in this group was English only.

The FFI (non-contrastive form-focused instruction) group received two form-focused tasks: meaning recognition of the target vocabulary (a multiple choice exercise), and a text fill-in activity with the target words provided in a ‘word bank’ at the end of the text. Here is an example of meaning
recognition, where learners were required to select the correct meaning of a collocation in the text.

*Hit the headlines* (paragraph 1)

(a) became hot news
(b) caused headaches
(c) was first in line

Here are the first two sentences of the fill-in exercise. The missing phrases are ‘hit the headlines’ and ‘launched a campaign’

*Bill Clinton has* 1. ______________ again. *He has* 2. __________ for his autobiography.

Upon the completion of each task, the teacher went over the answers with the class and provided the necessary feedback, including verifications and clarifications of the meaning of the target items. The interaction was in English only.

The CAT (contrastive analysis and translation) group received two translation tasks and brief explicit contrastive instruction. Here is an example of the first task in which learners were asked to translate the given sentences from L2 to L1. The target items are in bold font.

*Will the book* meet the expectations of the publishers? __________

*Scandals plagued* Clinton’s administration. ______________

The sentences were nearly identical to the sentences in the original text.

In the second task, after the L2–L1 translations had been collected, learners translated the same sentences from Hebrew into English. They could carry out the two tasks alone, or with their peers. As in the other two groups, on task completion, the teacher checked the answers and provided corrective feedback. During the second task, she also supplied a brief explicit contrastive instruction. For example, in the case of collocations, she pointed out that although the nouns had equivalent translations in Hebrew, the verbs that collocated with them were totally different (e.g. hit the headlines is ‘break into headlines’ in Hebrew, meet expectations is ‘answer expectations’). She suggested that learners should be cautious not to provide automatic verb translations, as this would result in unacceptable English collocations.

**Testing**

The day after the treatment, all the learners were unexpectedly tested on the target vocabulary. They were first tested on their ability to provide the words in response to their Hebrew translations, that is on active recall. Here is an example of two test items: a single word and a collocation:

*Translate the following Hebrew words and phrases into English:*

- ראיי לשבעת (raui le-shevach) ______________
- לענות על הציפיות (laanot al tzipiyot) ______________
The test sheets were collected and a 20-minute delay followed, during which the learners were engaged in an activity that did not include the target vocabulary. After the delay, the second test was administered. The target words were given in a different order than in the first test, and the learners were required to provide their meaning in Hebrew, or in English, that is to demonstrate passive recall. Here is an example of two test items: a single word and a collocation:

Translate the following English words and phrases into Hebrew or explain them in English:
Meet the expectations _________________________
Laudable_________________________

A week later the same tests were administered in the same manner in order to check how much of the target vocabulary was still remembered.

The answers were scored dichotomously. A correct answer received one point, an incorrect answer or a blank received a zero. In the test of active recall, minor spelling errors that did not distort the word’s pronunciation considerably were not taken into account. For example, the answer *opulant for ‘opulent’ received a point, but *gragirious for ‘gregarious’ did not. Since the focus of the test was the knowledge of the meaning–form link and such errors did not distort the word’s form greatly, the answer received one point. We decided not to accept non-target synonyms for the Hebrew prompts, for example ‘honest’ instead of ‘candid’. Therefore, learners were specifically told to provide words from the text they had studied and they did so. In the test of passive recall, any Hebrew translation or English explanation that reflected the semantic content of the word was considered correct. The maximum score for single words was 10 and 10 for collocations.

RESULTS

Descriptive statistics

We will present the descriptive statistics first. Table 1 presents the means and standard deviations (in brackets) of the tests measuring passive and active recall of the target vocabulary immediately after the instruction. Table 2 presents the results of the delayed tests.

The figures in both tables show that the lowest scores were received in the MFI group and the highest in the CAT group. Moreover, the scores did not go down on the delayed tests 1 week after the instruction. Some tests even yielded slightly higher scores. This can be explained by the interest that the tests generated in learners. They reported that even though all the materials were collected after the immediate tests, some items could be remembered, particularly if they had previously been practised in form-focused activities, both contrastive and non-contrastive. Hence, some learners checked them with their peers, or in the dictionary. The only results of the MFI group that are not lower than 1 are those of the passive collocation tests. Yet this has very little to
do with L2 learning, but it is concerned with the ability to detect the meaning of collocations as they are often transparent, as mentioned earlier. The active test of the same collocations, however, which required demonstration of L2 knowledge, yielded a result close to zero. On all the tests, the scores of passive recall are higher than the corresponding scores of active recall, which is not surprising. Vocabulary learning is an incremental process and learners usually acquire passive knowledge of a word before they acquire its active knowledge (except in the case of cognates) (Laufer 1998; Laufer et al. 2004; Webb 2005).5

**Inferential statistics**

In order to answer the research questions regarding the difference between the three instructional conditions, we carried out eight one-way ANOVAs,
four with the immediate tests, and four with the delayed tests. Each ANOVA compared the difference of means between the three conditions as follows: in the case of the single words–passive recall, single words–active recall, collocations–passive recall, collocations–active recall. The $F$ values of the eight ANOVAs are presented in Table 3. Since the differences of all eight comparisons were significant, we carried out Tukey’s post-hoc tests to check the differences between each pair of conditions for each ANOVA. Table 4 presents the differences between the means (standard error is provided in

Table 3: Differences between the three conditions (ANOVA results)

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<th>Test time</th>
<th>Passive recall $F$ value</th>
<th>Active recall $F$ value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single words</td>
<td>Collocations</td>
</tr>
<tr>
<td>Immediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>46.02***</td>
<td>28.43***</td>
</tr>
<tr>
<td></td>
<td>(df 2.72)</td>
<td>(df 2.72)</td>
</tr>
<tr>
<td>Delayed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>43.65***</td>
<td>21.27***</td>
</tr>
<tr>
<td></td>
<td>(df 2.72)</td>
<td>(df 2.72)</td>
</tr>
</tbody>
</table>

***$p < .001$.

Table 4: Differences between pairs of conditions (Tukey post hoc tests). Immediate recall

<table>
<thead>
<tr>
<th>Condition</th>
<th>Condition</th>
<th>Passive recall Difference in means</th>
<th>Active recall Difference in means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Single words</td>
<td>Collocations</td>
</tr>
<tr>
<td>MFI</td>
<td>FFI</td>
<td>$-3.74^{***}$</td>
<td>$-2.00^{**}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.60)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>CAT</td>
<td>FFI</td>
<td>$-5.50^{***}$</td>
<td>$-4.88^{***}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.58)</td>
<td>(0.67)</td>
</tr>
<tr>
<td>FFI</td>
<td>MFI</td>
<td>$3.74^{***}$</td>
<td>$2.00^{**}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.60)</td>
<td>(0.67)</td>
</tr>
<tr>
<td>CAT</td>
<td>MFI</td>
<td>$-1.76^{**}$</td>
<td>$-2.88^{***}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.60)</td>
<td>(0.67)</td>
</tr>
<tr>
<td>CAT</td>
<td>FFI</td>
<td>$5.50^{***}$</td>
<td>$4.88^{***}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.58)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>FFI</td>
<td>MFI</td>
<td>$1.76^{**}$</td>
<td>$2.88^{***}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.60)</td>
<td>(0.67)</td>
</tr>
</tbody>
</table>

**$p < .01$; ***$p < .001$. 

[54x584]
brackets) of each pair of conditions in the immediate recall test; Table 5 presents the results for the delayed recall test.

On the immediate tests, the differences between all pairs of conditions were significant. On the delayed tests, the only non-significant difference was between FFI and MFI in the passive recall of collocations. As mentioned earlier, this is a relatively easy test as most collocations are semantically transparent. But even here, the CAT condition yielded a significantly higher score than the other two conditions.

**DISCUSSION**

The study investigated whether incorporating contrastive analysis and translation activities into a text-based communicative lesson would make a significant difference in acquiring new vocabulary by comparison with a reading comprehension task alone, and by comparison with other form-focused activities following the reading task. The results revealed that the CAT (Contrastive Analysis + Translation) group scored significantly higher than the two other groups on all eight tests: four immediate tests—passive recall of single words and of collocations, active recall of single words and of collocations, and four identical delayed tests. The group that did not receive any form-focused instruction learnt almost no vocabulary. (As mentioned earlier, the scores on passive collocation show, at least in part, comprehension of
transparent meaning, not of learning new forms.) Non-contrastive form-focused instruction resulted in learning about 50 per cent of passive new vocabulary and 27 per cent of active vocabulary on both the immediate and delayed tests. The CAT group learnt approximately 72 per cent of passive and 51 per cent of active vocabulary, much more than the other two groups.

It is difficult to compare these results with the results of other studies which investigated FFI together with a communicative task. Different studies use different numbers of target words, different numbers of form-focused activities and use different ways to measure learning. (For description and comparison, see Laufer 2005). However, to our knowledge, almost none of the studies which investigated incidental vocabulary acquisition resulting from FFI, have yielded figures as high as our CAT group. It is remarkable that learners received these high scores when tested on the most difficult aspects of form–meaning knowledge: recall of word form and recall of word meaning. We did not test recognition of meaning or recognition of form. Nor did we ask for learners to provide a self-evaluation of whether they were familiar with the word or not. Since the acquisition of word knowledge is incremental and the more difficult aspects, such as active recall, are learnt last, we can say with confidence that since learners’ passive and active recall were enhanced by CAT, the easier aspects of word knowledge were acquired as a result of CAT activities as well. As for other aspects of word knowledge, which were not investigated here, our teaching experience and our experience as foreign language learners suggest that CAT could enhance them all. This is an empirical question worthy of further investigation.

As we suggested earlier, in the introductory part of the paper, the effectiveness of cross-linguistic form-focused instruction can be explained by the hypotheses of ‘noticing’, ‘pushed output’, and ‘task-induced involvement load’ and further supported by findings which show the pervasive influence of L1 in vocabulary learning. Learners were forced to notice the target items by receiving cross-linguistic instruction. These items became salient in the input when learners were taught the corresponding L1 forms and received information about the particular difficulties resulting from L1–L2 differences. As James (2005) points out, in the CLI (cross-linguistic influence) framework, the role of CA is to define salient foreign language input which may assist L2 learners by raising their cross-language awareness.

CA can now come out of the closet and cross-language Awareness can be practised in classrooms as a legitimate activity, for it will at the very least sensitise learners to the decisions to be made in their FL [foreign language] production, advising them when they can and can not resort with profit to the MT [mother tongue] (James 2005: 11).

Translation into L2 is a perfect ‘pushed output’ task that requires stretching one’s linguistic resources. To produce a good translation, learners cannot
avoid problematic words or structures since they are predetermined by the source language. The CAT group in our study was submitted to pushed output, which may have contributed to the success in learning in general, and to good active recall, in particular. Active knowledge implies a better memory trace than passive knowledge and is more difficult to achieve. In the specific case of collocations, correct production can be considered a special accomplishment, as active collocational knowledge is not readily attained even by advanced learners. We ascribe the superior results of active knowledge to the L1–L2 translation task, which entailed recalling and using the target word forms. This task is more demanding than any other vocabulary task which requires recall of word meaning, recognition of word form, or recognition of word meaning (Laufer et al. 2004; Laufer and Goldstein 2004). The participants’ engagement in a cognitively demanding task may have enabled them to remember and later produce the correct lexical items and collocations.

In terms of the involvement load hypothesis, the translation tasks had a higher involvement load than the tasks in the other two conditions. Let us look at the involvement load in each condition. In the MFI condition, one task required answering comprehension questions; the other was a general discussion of a topic related to the text. In both of them, learners could have used the target words, but they could also have used different vocabulary as well, particularly in the general discussion. (This was indeed the case reported by the teacher.) Hence, each task in this condition could be described as $+/\neg$ need, $+/\neg$ search, and $+/\neg$ evaluation. If a learner perceived a need to use a particular word, s/he would search for its meaning and make some decisions pertaining to its context. In this case, each of the three elements would receive a plus (+). But the learner could also convey the intended meaning using different words, in which case the involvement load in the case words not used would be a zero (0).

The first task in the FFI condition was a multiple choice exercise that required learners to choose the meaning of the target words from three alternatives. The involvement components included in it were ‘need’ (the word had to be focused on to complete the task) and ‘search’ (search for meaning). As there was no context in this task, there was no ‘evaluation’. The second task, which required filling in the correct target words in given sentences, included the element of evaluation as well, as a decision had to be made as to which word fitted which context. Hence the involvement load of the FFI condition was: task 1: $+\text{ need} + \text{search} - \text{evaluation}$, task 2: $+\text{ need} + \text{search} + \text{evaluation}$.

In the CAT condition, the learners were asked to translate sentences with the target words, first from L2 to L1, and then from L1 to L2. The ‘need’ element was present as there was no escape from focusing on the target words. Translation into L1 required a search for meaning whereas translation into L2 required a search for form. Hence the element of ‘search’ was present
in both translation tasks. Usually, a sentence can be translated in more than one way. The final choice of the translation must have been made after an evaluation of several translation alternatives. In each option, the target word was evaluated against the other words surrounding it. Moreover, in L1–L2 translation, the entire L2 context was created by the learner. Hence, the element of ‘evaluation’ was moderate in the L2–L1 translation task and strong in the L1–L2 translation. The involvement load in the CAT condition was therefore: task 1: + need + search + evaluation, task 2: + need, + search, ++ evaluation. The different involvement loads of the three conditions are reflected quite accurately in our results. The participants in MFI condition learnt hardly any vocabulary at all, the FFI condition fared much better, and the CAT condition yielded the highest scores.

On the basis of our results, some teaching implications are evident, mainly for classes where learners share a common L1. In order to perform a contrastive analysis of selected L1 and L2 areas and subsequent translation, teachers should be familiar with learners’ L1 and with its linguistic structure. Since learners draw upon L1 conceptual knowledge when making assumptions about L2 words and connections between them, teachers should make them aware of interlingual differences which may result in errors. Since words and word combinations which embody such differences are more difficult to learn, teachers should devote more teaching and practice time to these lexical items than to vocabulary which is similar in L1. This can take the form of additional exposure, use in communicative tasks, or in form-focused activities of a contrastive or non-contrastive nature.

CONCLUSION

James (1994) showed that both contrastive analysis and error analysis remained vital components of applied linguistics and language teaching. Neglecting the L1 would amount to ‘burying your head in the sand and hoping that effortless acquisition will take place in time’ (James 2005: 11). The evidence from the present research, together with evidence from grammar studies, suggests that there is indeed a place for contrastive analysis and translation activities in L2 teaching. This does not mean that we should abandon the communicative classroom and return to the ‘grammar–translation’ method, nor does it mean that we should teach the skill of translation at the expense of the ability to function in a foreign language. Meaningful communication has been the goal of communicative language teaching, but the best method for achieving this goal may not be identical to the goal itself. The research presented here suggests that second language learners may benefit from contrastive form-focused instruction in selected L2 areas through raising their awareness of interlingual difficulties, stretching their linguistics resources, and engaging in involving tasks.
NOTES

1 One reason for the relative paucity of contrastive FFI studies may be that researchers of a Second Language context did not find L1-based tasks relevant to the teaching of multilingual classes. However, contrastive FFI is of relevance in a Foreign Language context and is of theoretical interest to the Language Learning field.

2 The distinction between passive and active knowledge is not as simple as it may appear. Read (2000) points out that different people have made this distinction differently, which has created problems in comparing passive and active knowledge across studies. Here, we follow the distinctions of Nation (2001) and Laufer et al. (2004) and refer to the ability to supply the word form as active knowledge and to the ability to supply the word meaning as passive knowledge.

3 In the Israeli educational system, each class in high school is further subdivided into three proficiency groups: 3 points, 4 points, 5 points on the basis of an internal school test.

4 The second author was the teacher who carried out the study in the three groups of learners.

5 It was suggested by one reviewer that learners saw the target L1 meanings on the test of active recall and that may have aided them on the test of passive recall. We cannot know for sure whether there was a learning effect or not. The passive test was given after a 20 minute distracting task and the words were in a different order. Furthermore, in all vocabulary studies we are familiar with, passive knowledge proved to be better than active knowledge. Most importantly, even though the possibility of a learning effect cannot be excluded, it does not invalidate the main findings of the study which pertain to the differences between different instructional tasks. These were investigated separately for each type of vocabulary knowledge: passive and active.

6 One reviewer suggested that the test instruments were close to the practice tasks of the CAT group and therefore might have favoured it. First, in the translation tasks, participants were required to translate sentences, while in the tests they were required to translate isolated words. Second, in the passive recall test learners had the option of providing English explanations for the target words. Since the target words were explained in English in the other two groups, the test requirement was not unfamiliar to them. Most important, however, is the argument that adolescent and adult learners do not need to be taught to link L2 words to L1 words. They do this instinctively, as explained in the Introduction. This is also supported by our data. Even though English explanations were allowed in the passive recall test, most of the answers of the non-CAT learners were translations into L1 even though no translation was practised in class.

REFERENCES


Jiang, N. 2004. ‘Semantic transfer and development in adult L2 vocabulary acquisition’ in


