

Easifying Second Language Learning¹

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Introduction

Recent research has focused increasingly on the good language learner (Rubin 1975; Naiman, Fröhlich, and Stern 1978; Wesche 1977; Hosenfeld, 1976; Bialystok and Fröhlich 1977a, 1977b; Cohen and Robbins 1976; Cohen 1977). A distinction that has gained currency is that between acquiring a second language and the conscious learning of the language through what Krashen (1977) refers to as "monitoring." The studies reported in this paper concentrate on the identification of successful learning strategies—strategies that could actually be taught to language learners to help them maximize the benefits of conscious language learning. It is not very clear which behaviors actually promote success. Learners themselves may not pay conscious attention to what they do. In order to identify strategies, therefore, we must focus our attention on basic aspects of the language learning process and also on the interaction between the learner and the teacher.

This study set out to investigate some of the basic things that language learners do, such as learning vocabulary and participating orally in class, with the intent of identifying and describing strategies that "easify" the learning process—i.e. strategies that make learning more effortless. Specifically, we sought answers to the following questions:

1. How do students learn new second-language vocabulary? If they make associations, what kinds and how successful are the associations over time?
2. What insights about good and bad communicative strategies in the classroom can be gained from empirical observation coupled with verification by the students themselves?²

Subjects

The subjects were nineteen native English-speaking students on a junior year abroad program from the United States to Israel. They were taking an intensive Hebrew program for two months at the Jacob Hiatt Institute of Brandeis University, in Jerusalem, followed by field experience, and then continued Hebrew, less intensively. During the period of instruction, the learners lived together within the Institute or in nearby apartments. During the intensive Hebrew phase, students received four hours of formal classroom instruction each day, four times a week, supplemented by a series of lectures in Hebrew on various topics. The students were divided into three levels of proficiency: beginners (N=9), intermediate students (N=6), and advanced students (N=4). During the less intensive phase, the

students received six hours of Hebrew per week, and the rest of their courses, such as sociology, political science, etc., were conducted in English.

Since answers to the two research questions were pursued through what amounted to two separate mini-studies, each will be reported in turn in its entirety—i.e. procedures, findings, and discussion.

• I. Learning Vocabulary in a Second Language

Researchers are increasingly interested in the relationship between general research on memory and memory in learning a second language (e.g. Stevick, 1976; Cook, 1977). If research on learning second-language vocabulary can be characterized, then it can be characterized as reflecting one-shot studies rather than longitudinal ones, and often involving experimental tasks which are not necessarily part of regular classroom activities (Atkinson 1975; Ott *et al.* 1976; Henning 1973). When learning by association is introduced, then the types of associations are often restricted.

What we felt was needed was longitudinal research on second-language vocabulary learning, based on a realistic classroom activity (e.g. glossing in the native language new words appearing in a text). We also wanted to open up the research to the total array of possible associations that the learner might make.

With these interests in mind, in July 1977, we undertook a preliminary pilot investigation of learning through word association among seven learners of Hebrew as a second language at the Jewish Theological Seminary's summer course in Jerusalem. This longitudinal study was conducted over 40 days. We found that words learned through association were generally retained, as indicated by performance on a series of three recall tasks. Furthermore, students produced a number of types of associations.

With the experience from this initial study, we then set out to investigate the topic in greater depth and over a longer time frame. We subdivided the basic research question regarding vocabulary learning and the use of association into the following specific questions: When asked to learn new vocabulary from a written text in class, what do students do? Do students make associations? If so, what kinds? How successful are these associations over time? Does student proficiency affect success? Are there differences in types of associations across class levels? Does degree of contact out of class have any effect on words learned through association? Of what benefit are associations which are supplied by teachers? To what extent does seeing new vocabulary in context help in the recall of these words (as opposed to encountering these words in lists)?

Procedures

Seventeen of the students (9 beginners, 6 intermediates, and 2 advanced) took part in this study and were given seven different tasks, spanning approximately 100 days (July 27–November 4, 1977). The following is a listing of tasks by approximate day:

1st day—learners given a passage in Hebrew to read, according to their level and told to underline words that they did not know, both as the teacher read the passage out loud and then as they read it over to themselves; the teacher provided an English gloss for each word underlined; students given class time to learn these words and asked to write in margin the learning aid (if any) they had used to learn a word—i.e. association with the structure of the word, association with another word in Hebrew or with a word in English, etc.

2nd day—same text with individualized underlinings of words each student did not know; students to supply English glosses.

5th day—review of results on text, then personalized words in list form; students to provide English glosses.

7th day—review of results on lists, then given list of ten words of common difficulty to the majority of group; asked to supply glosses.

17th day—new passage with common words in original forms; students to supply glosses and indicate frequency of contact with words out of class ("no contact," "some," "frequent").

90th day—same individualized word list as on 5th day; students to provide English glosses and to indicate frequency of contact with words.

100th day—same text as on 2nd day, this time with each student's individualized words deleted, English glosses written over the deletions; students to supply the missing words in Hebrew.

Findings

In most instances, students simply tried memorizing the words that they did not know. As an aid to memory, some students rewrote the Hebrew word on the bottom of the page along with the English gloss. The number of words that students requested glosses for (in Task #1) ranged from 11 to 40. The mean percentage of correct glosses across all tasks was 75%. In other words, in $\frac{3}{4}$ of the cases, students were retaining new vocabulary words over time, whether through straight memorization or through the use of associations.

Six of the nine beginners reported associations that they used, five of the six intermediates, and both advanced students. It is likely that at least some of the associations made were a result of our specific request that they record any associations that they made. It was perhaps surprising that even with only 13 students reporting associations, we still tallied as many as eleven different types of associations. And it must be remembered that these were only those associations that students made when given a specific classroom task—i.e. associations for words glossed in a text. In other words, if students were learning words in conversation out of class, there could be other associations as well—such as by touch, smell, taste, tone of voice, identification with a person, with an event, and so forth.

The following are the categories of associations that appeared:

1. Associating Hebrew words to English words with a similar sound; e.g. *memaher* "he hurries" to "hare," *lazuz* "to move" to "snooze," *imunim* "training" to "ammunition."

2. Associating part of a word to an English word by sound and meaning, and the other part to a Hebrew word by sound and meaning; e.g. *benatayim* "meanwhile"—*ben* to *beyn* "between" and *tayim* to "time."

3. Associating sound and meaning to an English phrase; e.g. *benatayim* to "been a long time."
4. Associating Hebrew words with other Hebrew words by sound; e.g. *tsava* "army" to *tsena* "leave," *texov* "street" to *raxok* "far," *ramzor* "street light" to or "light."
5. Associating Hebrew words to proper names; e.g. *maxane* "camp" to *mane* (the street that the Jacob Hiatt Institute was on).
6. Associating to another language through meaning; e.g. *tox* "inside" to *tuchus* (Yiddish for "backside").
7. Associating by structure; e.g. *lifney* "before" to *lifamim* "sometimes," *seder* "order" to *lesader* "to order."
8. Associating by one or more letters; e.g. *masait* "truck" by [m], in that vehicles often begin with [m] in Hebrew, *maxane* "camp" by the picture of [x], [n] in Hebrew, because it looks like a shelter, *beemtsa* "in the middle" by the Hebrew [m] in the middle.
9. Associating with a frequently-seen sign; e.g. *laatsor* "to stop" with the sign *atsor* "stop" in busses.
10. Associating with the place in the text where the word appeared.
11. Associating by making a mental picture of the word.³

After charting so many associations, we then were curious to know which of these types of associations were actually successful in the sense that the learner was able to provide a correct gloss in English on all the tasks in which the word appeared. We were, of course, making certain inferences here, namely that retention over time was due to the initial association.

How successful are these different association patterns? And did frequency of contact with the words out of class make a difference? The following is not an exhaustive discussion of the associations made by the thirteen students who reported associations, but rather consists of illustrative examples from five of the students—a beginner and four intermediate-level students, in that order:

1. After learning *maxane* "camp" through the [x] looking like a shelter, a student got it wrong in Task #2, the text with personalized underlinings. But then it was correct in the three subsequent tasks in which it appeared, twice in list form and once in a passage. She reported no contact with the word out of class.
2. A student who made association to the [m] in vehicles got *masait* "truck" correct three times, once in text and twice in list form, and then wrong the last time it appeared in a text, when she had to supply the Hebrew for the English gloss. In this last trial, we note that the source of her association had been removed, i.e. the Hebrew [m]. This student had two completely successful associations over time, while reporting no contact with either word out of class: association by sound within Hebrew (*ramzor* "street light" to or "light"), correct all four times that it appeared, twice in text and twice in list; and association to English and Hebrew sound and meaning (*benatayim* "meanwhile" to *beyn* "between" and "time"). She also made a structural association for *magia* "he arrives," which was glossed wrong twice (both in lists) and then glossed correctly in text twice and in list once. In this instance, the learner reported some contact with the word out of class.

3. A student who associated *beemtsa* "in the middle" with the [m] in the middle of the word, got this word correct in all tasks in which it appeared (three times in text, twice in lists). She reported some contact with this word out of class.

4. A particularly weak student got the four words that he made associations for correct in all tasks in which they appeared. He reported frequent contact with the first three and no contact with the fourth. His associations were *laatsor* "to stop" to the sign on the bus, *atsor* "stop," association by sound from Hebrew to English (*memaher* "he hurries" to "hare"), association of a word with a picture (*nixnas* "enters" to a picture of "going in"), and *yešiva* "meeting" with the Yiddish *Yeshiva*.
5. As a final case, a student made several structural associations, one of which was successful in producing the correct gloss all four times that it appeared, although she reported no contact with the word out of class (*yešiva* "meeting" to *laševet* "to sit down"), and the other reflected inconsistent results (*mehanesia* "from the trip" to *linsoa* "to travel")—i.e. incorrect in text, then correct in list, then incorrect in list.

If general conclusions can be drawn from these results, it is that by and large if students, whatever their class level or individual proficiency level, used some associational patterns for learning vocabulary, the words were retained successfully over time. We also saw that the frequency of contact with words out of class did not necessarily affect the results one way or another. In other words, students who made successful associations retained words even if they had no contact with the word out of class.

Inadvertently, we were also able to investigate the effects of a teacher's supplying associations for the students. The intermediate level teacher actually gave six associations, perhaps partly because we had not specifically told teachers *not* to supply associations. Actually, this afforded us the opportunity to see whether students used the teacher's associations and if so, whether this helped. In fact, two of the five students making associations at this level each used two of the teacher's associations and got the words correct in all tasks. Another student reported using one of the teacher's associations and was not successful in learning the word (*mitkadem* "advances" to *lalexet kedima* "to go forward"—association by structure and teacher's acting it out). Then two students did not use the teacher's associations at all. What we find here is purely suggestive, given the small numbers. It appears that teachers can provide useful associations and that there will still be students who do not use these associations, but rather use their own or none at all.

When we looked closely at vocabulary learning performance by individual students at each of the three levels, we noticed fluctuation in performance from task to task. This fluctuation prompted a further analysis: calculating the average performance on the three tasks involving contextualization of vocabulary vs. the average performance on the three tasks involving lists.⁴ These results showed that at the *beginning* level, tasks involving lists were easier (average 84% correct) than were tasks with contextualized words (average 69% correct), whereas at the *intermediate* level, tasks with contextualized words were easier (average 77% correct) than those with lists (average 70% correct). This finding may suggest that only once students have some background in Hebrew are they able to benefit from having vocabulary in a context; that until that time, the appearance of words in isolated lists simply means fewer distractions.

Discussion

There are a number of issues that this research study raises. One concerns whether the more advanced learner is somehow better able to benefit from associations. Such a conclusion cannot be drawn from this study. Differential ability to make associations by proficiency may be a fruitful avenue for future research. It may also be that the contextualizing of vocabulary makes vocabulary tasks easier for certain types of learners and possibly for whole groups of students who are at a higher level of proficiency in the language. But this also would have to be investigated further.

There is no doubt that the task of asking students to record the associations that they made actually stimulated students to make associations, where, without such instructions, they may not have. This, then, is a reactive effect of the research.

A follow-up study (Cohen and Aphek 1979b) included the teaching of various ways of making associations explicitly at the outset—i.e. training students in making associations. This study also varied the tasks such that the words appeared in different inflectional forms and in new contexts.

It may also be interesting to see whether it is easier to make associations for words in a given form class—e.g. for nouns as opposed to verbs.⁵ More could also be done to vary the tasks—e.g. not just reading, but also vocabulary recognition in listening to spoken language, or vocabulary production in speaking as well. Work could be done with free recall to see what students do when recalling a set of words learned the previous day—e.g. do students recall the words in patterns that reflect organizational learning strategies in the mind?

Also, how important is it that the association be a close one? The Hebrew words or “light” and *ramzor* “street light” are closer in meaning than *lifne* “before” and *lifamim* “sometimes,” for example. It may be that with each type of association such as those cited above (11), the more successful associations will be the ones in which the forms being associated with one another are closer in sound or meaning. It might also be that the emotional impact of a word affects success at retention through association. For example, perhaps words that the learner perceives as more pleasant will also be more likely to produce successful associations (Pollio 1966, *re* associates for native speakers).

A phenomenon that occurred on occasion was that a word would be glossed wrong in one or more tasks directly following learning, but would then be glossed correctly in later tasks. It is possible that this is an artifact of the research design, namely of presenting tasks which repeatedly use the same vocabulary. Students may need repeated exposure to words and occasional review of their meanings to learn them correctly. It may also be that there is a settling process or residual learning whereby students sort out all the various stimuli they are exposed to, and that this takes time.

The research also taught us that the common word list idea and subsequent passage composed from this common list is not necessarily the best way to tap the students' learning skills. Rather, it may pay to have each student design his own individu-

alized set of words. The common words tend to include a fair number of words that are not at all difficult for at least some learners. And there is also the possibility of the opposite situation—i.e. that learners would not necessarily know very common words and would know more difficult ones. This might give the teacher the false impression that the student *does* know the easier words. The individualized approach is more challenging to the better students, too. More can be done with the concept of word lists as well. Such lists do allow for quick checks on vocabulary but may not be as taxing of global or pragmatic vocabulary skill as contextualized vocabulary tasks.

The individualized approach recognizes that students do not all begin at the same point—even among beginners, particularly in the case of Hebrew where some learners may have studied Hebrew a little or have been exposed to it through religious activities.

There is also the whole issue of what it means to learn a particular vocabulary word. Richards (1976), for instance, details the many things that a native of a language knows about a word that he uses. It is an arduous process at best for a non-native to gain mastery of the word in all those areas. There is the further point that a non-native does not start *tabula rasa*, but rather has his own total network of vocabulary in his native language (Vygotsky 1962). Thus, when he is exposed to a new vocabulary item in the target language, he is most likely going to translate this item back into his native language system, and so evoking the whole network of emotive meanings, associations, connotations, and multiple meanings that he has developed for this language.

Whereas the potential value of using associations in vocabulary learning appears to be substantial, we feel the need to inject a note of caution. As pointed out to us by Stephen Krashen (Personal Communication), the use of associations from the outset may be a form of unnatural short-cut at times. For example, does the learner have to call up the association each time he wants to remember the word, and if so, what effect does this conscious “monitoring” have on his performance? A follow-up study (Cohen and Aphek 1979b) appeared to find that later calling up of the association actually improved recall of the word. Secondly, does the initial forming of an association in the mind limit the learner's sense of the meaning of the word and of its selectional restrictions? Hopefully, this issue will be explored in future research.

II. Classroom Observation of Communicative Strategies and Student Verification

This section deals with the insights to be gained from empirical observation of communicative strategies in the classroom when coupled with verification by the students themselves. The study was prompted by the frequently inconclusive results of classroom observation alone (Naiman *et al.* 1978). The researchers attempted to complement observation with intervention, in order to corroborate or refute the intuitive reactions of the researchers. The researchers sat in on a dozen class sessions for a minimum of an hour each time, in an effort to identify informative moments in the learning process—i.e. moments in which the students made a particularly revealing type of error, achieved striking success, or paused in confu-

sion; as well as moments when the student-teacher interaction led to student confusion possibly resulting in erroneous utterances.

Whereas our original intention was to let areas of conspicuous success provide opportunities for investigating communicative strategies, it turned out to be easier to identify and investigate areas of difficulty because the errors that arose called attention to the problems. We were not, in fact, struck by exceptional success. It may have been that such areas of success were not that common or at least not conspicuous. In fact, not many occasions arose in which communicative errors seemed to merit immediate feedback from the student as to what strategy was being used. Part of the problem is that students do not do very much talking in these kinds of classes, and when they do talk, it is often orchestrated by the teacher.

It became apparent that it was best to get student feedback as soon after the event as possible. Several times the class session was actually interrupted in order to ask the learner what he was thinking when something was said. These interventions were usually informative, but did usually distract the teacher. In one case, such intervention led the teacher on a rather lengthy digression. The more effective approach was to talk to individual students or to groups during a break or at the end of the class session. The approach of asking students to *retrospect* on what they said, even only a day later, was found to be only about 50% effective.

It should also be pointed out that teachers resented having their students observed altogether. Even though we told the teachers that we did not come to evaluate them, they were uncomfortable. Also, the very fact that there was someone in the classroom may have changed the nature of student participation somewhat. However, some reactive effects of classroom observation are unavoidable.

The data to be presented below have been organized in the following way. First, each instance of student communication reported on contains in it some deviant form or forms. In all cases, the student's explanation for how he arrived at that form was *not* the explanation that the researchers would necessarily have predicted. Each student mentioned in the discussion is also identified as studying at the beginner (B), intermediate (I), or advanced (A) level, and as being a good (g), fair (f), or poor (p) performer generally (on the basis of class grades, success at learning vocabulary words, and so forth). Thus, it is possible to evaluate student strategies in terms of class level and the student's individual proficiency.

The instances of communication are also labeled according to the type of communicative strategy most likely reflected in the given case, and these strategies are, in turn, grouped as to being "good," "bad," or "neutral." These ratings are only suggestive, and not definitive since, for one thing, a strategy that is good for one student may be bad for another. Also, the ratings are more intuitive than empirical, in that they are based largely on the researchers' preconceptions about successful second-language strategies. It must also be remembered that in *all* cases both good and bad strategies led to deviant forms. In other words, the strategy can be a good one leading nonetheless to a deviant form. But then again, the process of language learning is one of continual experimentation and, hence, characterized by the committing of errors on the way to mastery.

Good Communicative Strategies

1. Creating a verb form through association

The following is an example of a strategy that could only be revealed through questioning. In a dialog with a fellow student, a student (B/f) asked where she would have to get off the bus, as follows: *eyfo ani yariya!* "where I (no such form)?" The correct form instead of *yariya* is *ered* "I will get off." The students had been exposed to the future but had not achieved productive control over this tense at the point of observation. The student explained that she lived on a street called *yordey hasira* and knew that the first word of the street name was also derived from the verb *laredet* "to get off, go down." The prefix of her verb form would suggest that she was constructing a present tense form in place of *yoredet*. From her explanation, it would seem that the first part of her form is taken from the street name. It may also be that she is using the third person future prefix *y*, as in *yered* "he will get off."

In any event, the learner is using association to a street name to help in communication, and this, in itself, is a plus (see the first section, on vocabulary learning through association). The creative process revealed here is much like that of coining a new word, which was shown to correlate positively with vocabulary learning over time (reported on in section #1).

2. Generating rules

Generating rules for how the language works is a fundamental process in language learning, and hence is rated as a potentially good strategy. A host of error analysis studies have demonstrated how the appearance of errors in learners' speech may be an excellent indication of the stage of rule development in the learners' interlanguage. For example, one student generated a passive verb form by combining the passive form for the first conjugation, *nixtav* "it is written," with the past participle, *katuv* "written," producing **nixtuv*. The student (I/p) said that she thought *nixtuv* was the passive structure. This type of error reflects an active process of rule construction. Another example of rule formation was the following: **kol dvarim* "all things," with omission of the definite article, *ha-kol hadvarim*. The student (I/f) explained that she was making an analogy to *kol yom* "every day," an expression not containing the definite article.

It should be noted by way of qualification that generating rules is a good strategy among flexible learners, who will be willing to discard an incorrect rule and introduce another more correct one.

Bad Communicative Strategies

1. Not attending to the question in its entirety

The teacher asked a student (I/p) when Shmuel Hanagid lived, and the student said when he died (*met* "he died" instead of *xay* "he lived"). The student reported that he did not pay attention to the whole question. It should be pointed out that this student did not like the teacher, and so was generally uncooperative. (When a new teacher was introduced after three months, his performance improved somewhat.) It is also possible, of course, that the student did not yet have an effective general strategy for looking for the topic in a question.

2. Field dependence: Distraction from material in the immediate context

After the teacher had explained the difference between *ašir* "rich" and *ani* "poor" and after a particularly studious pupil (B/g) had asked for a clarification as to which word meant what, this same student seemed to have confused the two. The teacher asked:

eze iš yeš lo harbe kesef! lit. "Which man is there to him much money?"

The student answered, *ani* "a poor man." In questioning the student as to the source of confusion, she explained that once she heard *lo*, she assumed this to be the homonymous negative particle *lo* and interpreted the question in the negative, i.e. "Which man doesn't have a lot of money?"⁶

Although the negative form would actually have to be *eyn* rather than *lo*, the important point is that the learner heard what she thought was a marker of negation. This is an example of what we are referring to as "field dependence"—i.e. distraction caused by a word at the local level, in the immediate context. What is not clear is whether this is a fixed cognitive style, or whether it is possible to train a learner to be less field dependent—i.e. to be more cognizant of the larger context so as not to be misled by local distractors. If it is possible to shift the learner from one style to another, then we would refer to field dependence as a "bad" strategy, with field independence being the "good" strategy.

3. Grouping words in the target language by sound alone

A student (I/f) said *hirgia baarets* "he calmed down (someone) in Israel" instead of *higia baarets* "he arrived in Israel." She said that at some time in the past she had, with the help of a dictionary, grouped together four verbs that were similar in sound: *lehargia* "to calm down," *lehagia* "to arrive," *lehargil* "to accustom," and *lehargiš* "to feel." She then learned them as a group and at the moment when retrieval was necessary, she selected an inappropriate member of this group. This is, in fact, probably a bad strategy—i.e. grouping by similarity in sound without some further means of differentiating among the words.

4. Focusing only on the word level

There were several cases of learner attention in reading focused only on individual words, without paying attention to the context. For example, one student (B/p) asked several times what *maspik* "enough" meant. It seemed like an easy enough word. The student explained, however, that she confused it with *mastik* "chewing gum." It is interesting here that context did not help to disambiguate the word for her, but rather simply added to her confusion. The student was thus operating at too local a level—not looking for collocations, for phrasing.

What makes the above strategy "bad" is that context is essential in the accurate comprehension and production of lexical items, even for natives. Of course, the vocabulary learning study, reported on above, suggested that perhaps beginning learners sometimes find context to be more of a hindrance than a help, until they gain greater mastery of the basics.

5. Lack of structural analysis of a word

This is more accurately the absence of a good strategy, namely, word analysis. A student (B/g) asked the meaning of a word written on the board, *xug*, "department," after the word had been defined and used extensively in the lesson. He explained that in the discussion, the word had only been used in its plural form, *xugim*, and so he did not recognize the word in the singular. This was a good student who did not have problems with singular/plural relationships in general. The "bad" strategy is to let words go by without noting structural features which are crucial signals of meaning, such as number in the case of *xug-xugim*.

Neutral Communicative Strategies

We identified at least four strategies that may not be inherently good or bad, but can be either: guessing, transfer from the native language, the use of unanalyzed material, and the preplanning of a phrase or utterance.

1. Creating forms through guessing

Rubin (1975) would suggest that the learner who is willing to guess—i.e. the learner who is comfortable in the face of uncertainty—may be the better learner. But of course, guessing is more likely to be a "good" strategy if the learner is an accurate guesser, i.e. efficient at gathering and storing information and at using clues. It may be that guessing ceases to be a good strategy once the learner reaches a certain stage, for example.

One pupil (I/f) noted that she did not have her verbs sorted out according to conjugation and that she just guessed from time to time—not on the basis of any particular analogy or association. Two examples of guessing were the forms **lezakor*, seemingly a third conjugation verb, instead of *lizkor* "to remember," a first conjugation verb; and **bišal* instead of *bišel* "he cooked." The researcher might, of course, question the learner's interpretation that she is not making any generalizations. Regarding the second example, it could be argued that the *a* of *bišal* is by analogy to the vowel in first and second person singular and in first person plural respectively: *bišalti*, *bišalta* (masc.), *bišalt* (fem.), and *bišalnu*. Yet different students can arrive at the same deviant form in different ways. And it is reasonable to assume that guessing is one way.

2. Transfer from the native language

Research on language transfer has indicated how transfer can be quite helpful in that there are always similarities across languages, which the learner can draw on to lessen the learning burden (see Selinker, 1969). On the other hand, transfer can also produce deviant forms, as when the two languages are different with respect to the given structure. The following is an example of transfer which in this case produced interference (hence, negative transfer)—but interference which was not obvious to the observer and was revealed only through student introspection. The case in point was a student's (B/g) use of the past tense in Hebrew in giving directions to someone for getting to a place:

**axaray raitá kfar raxel*. . . "after you've seen the town of Rachel. . ."

Aside from the three local errors—in the use of the masculine *raitá* 'you saw' instead of the feminine *rait* "you saw," the accent on the last syllable instead of on the second (*raitá*), and the absence of *še* 'that' before the verb (*axaray še. . .*), there is the further point that in Hebrew the present perfect tense (expressed by the same form as the simple past) is not used to indicate future perfect (i.e. "you will have seen") as in English. In Hebrew, the simple future inflected for second person feminine, *tir'i*, is called for. The investigator realized that interference was the problem only at the moment that the student gave an English equivalent of what she had wanted to say.

3. The use of unanalyzed material

The use of unanalyzed material (i.e. certain ritualistic social routines, such as greetings, invitations, apologies, and so forth, as well as other units learned as a whole) has been shown to be an effective means of engaging in communication during the initial stages of second-language learning (Fillmore 1976). The following is an example of the use of unanalyzed material, in this case producing an error. A student had found in the dictionary the form *naasa* "he became" for use in a class talk. (That dictionary presents verbs in the third person singular form.) The teacher wrote this form on the board. Another student (I/g) was asked to discuss what the first student had said, and she said:

*harbe xošvim še yisrael tsarix *naasa yoter gadol* 'Many think that Israel has to become bigger.'

She took the verb form in the inflected form *naasa*, and used it in the infinitive slot, *leheasot* "to become." The student explained that she simply took the word as it appeared on the board and that the teacher's explanation was too quick for her. The confusion may also have been because the teacher did not give a full gloss—i.e. "he became," "to become," etc. The teacher explained, after class, that she had purposely given little attention to the form because it was too tough for students at that level. This example illustrates how a student may use a form exactly as it appears in class, without analyzing it to determine the appropriate inflection of the form in the given context. It also illustrates how students, particularly the better ones, pay attention to a number of things, even what teachers may wish to pass over lightly or avoid discussing.

Actually, the use of unanalyzed material seems to be most effective (i.e. non-error-producing) in the generation of pat phrases, such as *ma ixpat lexa?* "what difference does it make to you?" and the like. Probably because they appear as one unit, rather than within context (as with *naasa*), there is more likelihood that they will come out sounding correct. Fillmore (1976) points out that little by little the learner begins analyzing these phrases and using elements of them productively.

4. Preplanning of a phrase or utterance

We found at least two types of preplanning errors—one in the incomplete production of a construct form and one in the lack of elision in an entire preplanned sentence. This area of preplanning may be a good example of where a communicative strategy is good for some learners and not for others. Of course, under the

pressure of a communicative situation, preplanning may slow a learner down and possibly interrupt the flow of conversation.

The following are the two examples found in this study. One student (I/g) used a noun in the construct form without its accompaniment:

*ze al *hamilxemet neged haaravim* "It's on the war against the Arabs."

In construct form, *milxama* "war" becomes *milxemet* and the definite article *ha* is dropped. The student explained that she was going to use a construct form, *milxemet šešet hayamim* lit. "the War of Six Days." but decided against it at the last minute.

Another student (I/p) produced a sentence in which he neglected to use the obligatory elision between the preposition *le* "to" and the definite article *ha* "the," i.e. *la*. He said:

*latet adama *lehaaravim* 'to give land to the Arabs'

He explained that he had not received formal instruction concerning elision but was aware of it from his study of French. He gave as the explanation for this error that he plans out each sentence in its entirety before he speaks and then gives the whole sentence, whereas someone else may utter sections of the sentence as he is producing it, pausing between sections. The implication is that someone who generates the sentences in sections with a pause between each one would pay more attention to a matter such as elision. It appeared that this learner was more caught up in the process of choosing vocabulary and syntactic patterns, than in that of considering phonological (actually, morphophonemic) adjustments according to the context.

Discussion

We note that both good and bad communicative strategies appeared across class levels, and were used both by better and poorer students. We also note that the communicative strategies identified are just those that emerged from an introspective investigation of reasons for learners' errors. But instead of providing an exhaustive list of communicative strategies, this section has attempted rather to demonstrate how difficult it is for an outside observer to establish the actual source of the error and to identify the learner strategy being employed without consulting the learners themselves.

It is, of course, true that learners may not know why they produced certain forms, or may be inaccurate in their explanations. The important point is that if the purpose of observation is to find out what the learners are doing (thinking, processing, etc.), then classroom observation needs to be coupled with more interventionist tactics such as getting students to introspect (or retrospect at short range).

This phase of the research raised some real questions as to what "good" strategies consist of. For example, is the use of broad association (as in *ani yariya*—

association to a street name) actually a good strategy? In the section on vocabulary learning (above), we also raise the issue of "closeness of association." Also, in what instances and with what learners might preplanning of utterances be a good strategy? Perhaps too much preplanning is detrimental, particularly for certain types of learners. These questions warrant further investigation.

Conclusion

Clearly this is only a start. The findings from these two mini-studies still do not provide very many definitive guidelines for the language learner in easifying the learning process. Yet we feel that some of the basics are here. It appears that word associations can help reduce the learning burden, and we have found that making associations does not necessarily come automatically. Instead, possible associations should probably be laid out to the students more explicitly.

With regard to the classroom observation study, we think that we validated our methodological point—i.e. that in order for the observer to identify the communicative strategy that the learner is using, he may well have to ask the learner himself to introspect. With respect to which communicative strategies are good and which are bad, there appears to be much work still to do. Our categorizing here has been more theoretically- and intuitively-based than empirical.

Although certain generalizations in this study, particularly regarding word association, are based on a small population (19 students) and so may be questioned on these grounds alone, it is our contention that it is important to start out small so as to establish areas worthy of further larger-scale investigation. Vocabulary learning through word association is one such area. Hopefully, after more extensive research has been conducted, it will be possible to draw up a manual for the second language learner on how he can easify the learning process.

The particular direction that future research will take is still in the planning stages. But there clearly needs to be more empirical-level work with vocabulary learning—i.e. an experiment wherein the relationship between certain sets of associational strategies and retention is charted over time. Variables such as the type of association, the class level, student proficiency level, student contact with the words out of class, and so forth, would all be taken into account.

It also appears useful to develop a screening device for checking students' cognitive style and personality factors. There seems to be a need to develop measures of cognitive flexibility and extraversion, for example, that are more compatible with second-language learning phenomena than are currently-available psychologically-based measures.

Footnotes

1. The research reported on in this paper was supported by a grant from Brandeis University, and was presented in brief at the Fifth International Congress of Applied Linguistics, Montreal, Canada, August 20-26, 1978. We would like to thank Joan Rubin and Steve Krashen for their helpful comments on earlier versions of the report upon which this paper is based.

2. We also investigated what could be learned about second-language learning from the way that students organized their notebooks and studied for tests, and we looked at the strategies that students used in taking second-language tests. Findings in these two areas are reported in the original report (Cohen and Aphek 1979a) upon which this article is based. The findings on test taking strategies also appear elsewhere (Cohen, in press).

3. In the preliminary pilot study with Jewish Theological Seminary students, at least two other types of associations appeared—i.e. associating a Hebrew word to an acronym in the first language (e.g. *ofek* "horizon" to O.P.E.C.) and associating a word with a person's name (e.g. *ofek* with Aphek).

4. We thank Shoshana Blum-Kulka for suggesting this line of analysis.

5. Research has, in fact, found that students were more successful at recalling nouns than verbs and adjectives in learning Spanish using the mnemonic keyword approach (sound + image) (Rough and Atkinson 1975). Similarly, processing of nouns (in reading) has also been found to be easier among natives than the processing of verbs because nouns are generally more concrete (Marshall *et al.* 1975).

6. Hebrew is rich in homonyms, which creates a problem for the learner. For example, there are three special words that sound the same in Hebrew: *kara* "it happened," "he tore," and "he read."

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