Stages in the Acquisition of Foreign Lexis

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Abstract The article presents the model of foreign vocabulary acquisition which consists of five consecutive stages, namely: (1) the filter, (2) phonological structure, (3) semantic structure, (4) retention and storage, (5) retrieval. The author discusses each of the stages from psycholinguistic point of view and supports his observations with the literature devoted to the problem of linguistic associations, meaningless associations etc.

Keywords Vocabulary acquisition stages · Foreign lexis · Associations

1 Introduction

In this paper I would like to outline the chronological stages of foreign vocabulary acquisition. The stages of acquisition will serve here as factors which both determine acquisition and then vocabulary use.

For our purposes here the model of acquisition consists of the following stages:

1. The Filter.
2. Phonological Structure.
3. Semantic Structure.
4. Retention and Storage.
5. Retrieval.

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2 The Filter

The process starts with the filter, like acquisition of any language structure. No matter how we treat the Krashen's notion of the affective filter we have to agree that the condition for language acquisition is the learner's positive attitude, that is his/her eagerness and readiness to acquire.

The order of acquisition of different grammatical categories may be caused by pragmatic or frequency factors, but the decisive factor is most probably the filter (filtering the data in).

The best illustration of this situation is the special status of nouns in the acquisition process. Nouns are the first lexical items which are acquired. The whole process of language learning starts with the acquisition of nouns in large quantities before other lexical categories. First of all concrete nouns are acquired, and then more and more abstract ones. Nouns seem to be filtered in before other categories.

3 Phonological Structure

The phonological structure of a lexical item is the first contact a learner is exposed to. The foreign sounds and their strange combinations are the first difficulties to be overcome. The difficulties are very precisely described in the results of contrastive studies between L1 and L2 (at least for European languages). They have been generally accepted since the early days of structuralism and we can take them for granted.

The contrastive studies criterion and method was applied by Lado (1957) to work out a hierarchy of difficulty of foreign vocabulary for teaching purposes. The three levels—easy, normal and difficult were selected by Lado according to the principle of similarity between mother tongue lexical items, and their counterparts in the target language. The scale is as follows:

1. Similar in form and meaning—*easy*.
2. Similar in form but different in meaning—*easy*.
3. Similar in meaning but different in form—*normal*.
4. Different in form and meaning—*difficult*.
5. Different in their type of construction—*difficult*.
6. Similar in primary meaning but different in connotation—*difficult*.
7. Similar in meaning but with restriction in geographical distribution—*difficult*.

The above scale is quoted here to show us that the problems of foreign lexis acquisition are entirely different for the recent investigator.

Recent approaches to the phonological structure of items concentrate more on the retention aspect. With the development of psycholinguistics, phonological structure (Stage 2) is studied in relation to retention (Stage 4) and not to the phonological structure of L1 counterpart lexical item.

The length of a word is an important factor here (Gatherole & Baddley, 1993, p. 27). According to specialists in working memory, short words, in the process of language acquisition, are easier to retain than long ones. They undergo more sub vocal rehearsal than long ones within the same time period and thus are better retained.

It has also been established that lexical items which are acquired in pairs are retained better when they differ with many phonemes than when they differ with only one. *Cat-mat,* when presented together, are not retained as well as, e.g. the *cat–dog* pair. This is not merely due to the auditory discriminability according to Gatherole and Baddley (1993, p. 11).

The tip of the tongue phenomenon (TOT) shows that certain elements of phonological structure are retained better than others. When trying to recall a name or a word we usually remember:

1. The first sound,
2. The number of syllables (the length of the word),
3. The place of stress
4. A suffix.

Usually we do not remember all of them at the same time. It seems that a given lexical item is represented in the memory by a frame, with the place of stress indicated. The frame has the proper length, i.e. the number of syllables. It also includes the first sound and/or the last one. In the process of recall individual phonemes are inserted. It seems that they are the least important information which is stored. The above four elements seem to be more important in the hierarchy of recall, than individual phonemes.

The phonological structure is the first contact a learner has with a lexical item. A beginner foreign language learner is very sensitive to the phonological shape of the new code. He is much more aware of the phonological and morphological structure of vocabulary items than advanced learners who automatically move from sound (or spelling to) to meaning. This awareness is documented by many studies and their results.

First of all association tests provide this evidence. Beginners respond to phonological stimuli with phonologically similar reactions. An association made by an English speaker learning Polish *piwo* (beer) was *piwnica* (cellar) unlike advanced learners of English who responded with semantically related reactions, e.g. *black–white* or their translations *black–czarny*.

Native speakers of Polish respond to *piwo*, associating it with a pub or a favourite brand of beer. *Piwnica* is probably associated more with storing food than *beer*. In spite of the fact that *piwo* and *piwnica* are historically and thus morphologically related the associations of proficient speakers are holistic and semantic.

Such phonological and morphological analysis of items is typical of beginners when outline is interpreted as *out of line, nevertheless* as *never less* and *discourse* as *without direction* (Laufer, 1989). Competent speakers react to lexical items holistically, that is to their meanings and not their forms.

A new lexical item for beginners is a string of nonsense sounds. The situation can be compared to the early experiments on memory performed by Ebbinghaus in 1885. He coined non-existent one syllable strings in order to avoid any meaningful associations. In this way Ebbinghaus studied the capacity of the memory for nonsense strings. After one hour 40 % of the items were forgotten, next day another 20 % of strings had disappeared.

The capacity of the memory to retain meaningless strings is not very impressive and this is also the case of memorization of foreign lexical items before they are linked with their meanings (Stage 3). Further evidence of the poor retention of items without meaning, versus those with meaning is the comparatively poor memory for proper names. The results of experiments and the everyday experience show that proper names are harder to recall than common names.

It is more difficult to recall the name (Mr) *Baker* than the occupation *baker*; as we know more semantic propositions about the occupation *baker* than the name *Baker* (Cohen & Burke, 1993, p. 250).

Proper names are arbitrary and "meaningless", in similar fashion to new lexical items. Proper names have references but no sense. They refer to tokens or individuals, unlike common names which refer to types and categories (Cohen & Burke, 1993, p. 259); and thus they are integrated into a set of associative links, that is into a memory system.

The link connecting a token with its reference is much weaker than the one connecting a type or category with a common name, because it is a single link. A type or category is interlined with the whole associative network. During the process of retrieval of a common name this network activates, converging from many-to-one-links on the target noun.

There are reports of clinical cases that in some patients the memory for proper name is preserved and for common names is impaired which means that proper names have links separate from those of common names.

The phonological structure of proper names is unpredictable, like that of foreign lexical items for a new student of a foreign language. They also, like the foreign vocabulary, do not have alternative forms, do not have synonyms.

The beginning of lexis acquisition is most probably characterized by the single connection of a phonological form with its meaning and its semantic trace. This is especially true when the acquisition takes places in natural conditions without reference to L1. When the meaning is integrated into the associative network of meaning and memory the learner's awareness of the phonological structure disappears. It is replaced by holistic reaction to a lexical item.

The stage is referred to by psycholinguistics as "the disappearance of the verbal memory and the retention of the memory for ideas" (Bartlett, 1932; Ellis & Beattie, 1986, p. 246). It is at this stage in L1 when children change the wording when retelling a story. In L2 it probably takes place at first stages of paraphrasing or when generating new sentences. From this point onwards syntactic information, e.g. passive versus active voice, is not retained but only the meaning of a message.

The separation of phonological structure from its meaning is illustrated by the situation when a message is remembered without its exact wording. Indeed, quite

often among bilingual speakers the information is retained without remembering the code (the language) it was conveyed in. It is the stage when a story ceases to be a text and becomes a plot.

The lexical item in question gets integrated into a network of associations and is combined with earlier acquired knowledge and lexis. When retrieved it is not by itself any more but rather it is accompanied by the entire structure of associations, the structure it is a part of.

The present author (Arabski, 1998) studied the reactions of Polish students to English stimuli. 66 Polish students of English were asked to produce their associations and reactions to 110 English word-stimuli. Over 70 % of reactions were English lexical items while only 12 % were Polish ones (the rest were Ø reactions). There were more interlanguage reactions among less advanced learners than among the more advanced group. The majority of interlanguage reactions (57 %) were translations, e.g. *table-stół* which may mean that the semantic trace for both L1 and L2 is common for both vocabulary systems for some time. Among more advanced learners translations were rare. They responded with interlanguage reactions of the *table-chair* kind.

According to Greganov (personal communication, June 7, 1984) the acquisition of a lexical item entails acquisition of its associational structure on top of its meaning and relevant syntactic information. The results of association tests, especially the early ones (e.g., Kent & Rosanoff, 1910), served to establish association norms. These results show that among native speakers of a given language the associations are quite regular and predictable, and thus are an essential part of language proficiency.

Association is in turn very strictly connected with retention and memory. The memory models of, for example, Quillian (1968) or Collins and Loftus (1975) (to mention only three names) present semantic memory as a network of associations and a continuation of the old concept of associationism in psychology.

It is relevant here to consider the results of the questionnaire distributed by this author among advanced learners of English which show that learners consciously use many techniques to retain new vocabulary items. Some of them are very inventive, such as the application of drawings and colors. The most common are association strategies: the subjects associated new foreign vocabulary with Polish and vocabulary items in other languages.

Almost everyone in this survey learns vocabulary in context, not only to learn its use but also to use context as a point of reference and an association element which helps retention.

The mnemonic strategies which have been used in language teaching for ages serve the same purpose. They change meaningless strings into meaningful ones.

Retention means integrating a new lexical item into an existing network of associations. The item is then stored along with semantically related ones. The evidence for this process are mistakes which consist in replacing one item by an other. But as a rule this substitution is of the same syntactic and semantic category, e.g., give me that *book* instead of a *map.* A mistake of the type, give me that *happiness* is very unlikely in this situation. A *map* is stored in the neighborhood of *book* and far away from *happiness.*

The situation however is much more complicated in the retrieval process, since we get to some lexical items through 'the tip of the tongue' procedure. We remember a first sound or a last one or sometimes only the length of an item. Clearly, access to lexis is through its phonological structure as well.

4 Conclusion

To conclude it seems that the lexical items which are acquired and stored in the semantic store are also retrieved there. Those which are not part of the association system yet have to be retrieved in the phonological stage. The retrieval process starts with the semantic stage; if unsuccessful, it continues to the phonological stage where TOT and other similar processes take place.

It seems that full acquisition takes place when a learner's reaction to a lexical item is holistic, and when an item is integrated into a system of intralingual associations, and when the phonological stages serves only for automatic encoding of a given meaning. The opposite takes place when a given meaning get to the phonological stage and searches for a phonological form. This situation resembles status of proper names in the memory.

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