Schmitt (2000) Chapter 7: Vocabulary acquisition

As Schmitt (2000) mentions researchers do not have a very good picture of the process or processes of vocabulary learning in an additional language. The research is fragmentary and tends to focus on very general trends in development. Reading through his discussion of this, which he primarily takes from Nation (1995), it seems to me that both of them are simply missing or ignoring (despite being experts in the field) the very basic nature of lexis and the mental lexicon.

We have explored in this course the nature vocabulary or, better put, lexis and have seen that it is a very large area indeed. On the lexicalist view that we've been taking here, lexis comprises the central core of the linguistic system. So we are dealing with much more than large amounts of words (and word families), but also the behavior of those words and the interplay between different lexical items. This paints a huge and varied picture of the types of knowledge that needs to be learned. It also bears mentioning strongly here that it is words or lexis that connect and in many ways allow language to develop from the actual world around us. When looking then at the learning (not acquisition) of an additional language (and this means a language in addition to at least one which someone has developed and already learned to use to a certain extent) this means that there is a huge interplay between language, the pre-existing languages and the world outside any of those linguistic systems but which has been recoded (idiosyncratically in part) into those systems. Of course, then, this (vocabulary learning) is going to be a not only a lengthy and complicated process, but a highly personalized one. That is, the nature of both learning and vocabulary is shown in the general learning processes of incidental and explicit learning, which we will return to shortly.

Reading through the brief introduction in Schmitt (2000), chapter 7, is seems that he is still affected by the idea that language and by extension vocabulary is innate. It should be clear to us after our discussion of the nature of vocabulary that language is neither innate nor a rule governed system. Looking at the lexicon, it is the perfect example of a connectionist system. There are no rules, only patterns, and these patterns are generated and maintained by the connections between points. On this view, grammar does not exist as a separate entity. It is the byproduct of the connections in the lexicon. In effect, grammatical patterns are built out of words and the patterns that they have created/developed. These patterns are learned, so it is strange to see Schmitt still using strange terms like acquisition, which implies innateness. Likewise, addressing stages in the acquisition process is an innatist way of looking at language. Again, before we begin our own exploration of word/vocabulary/lexical learning it is important for people to reflect back on what we have discussed and discovered about the nature of lexis in this course. We need to devise ways of thinking about the learning of vocabulary that match our understanding of what it is and how we believe it to work.

Vocabulary learning is incremental.
The idea that vocabulary learning is incremental (takes places in a lengthy, piecemeal way) seems obvious given that we are now aware of the complexity of vocabulary knowledge. Just to remind us, what follows are the different types of things we need to know about a
as we discussed previously in week 3.
-The meaning (really meanings)
-The written (graphemic) form
-The spoken (phonemic) form
-The grammatical behavior (subcategorization information)
-Colloquial patterning
-The register
-The associations
-Frequency of use
-(Translation equivalents - really, this is considered part of a word’s associations)
-(Involvement in MWUs)

Clearly, there is no possible way that any given learner is going to be able to learn all of these aspects at once. Thus, the learning of any given lexical item will be a rather lengthy and highly individualized process. It is individualized both because of the types of exposure the learner receives as well as the learner’s internal cognitive and affective states which determine how she uses her exposure. The incremental nature of vocabulary learning also pulls the learner in two directions. One can move up or down the list above adding new types of knowledge and one can also further develop and fine tune knowledge in any one of these areas. Of course, both types of development are necessary and both are based on incremental learning.

The fact that vocabulary learning is incremental basically means that learners need to be exposed to the same word many times. Multiple exposures are necessary but more than that they also need to be varied in some way. By varying the different contextual features within the exposures slightly or largely the learners are at least in theory, able to pick up new information related to the word. It might in some ways, as we shall see, be helpful to simply repeat words in the same context (so that the learner can possibly pick up something new out of the same context), but varying the context is a better way of helping students to learn more about the word.

Ways of altering the context

Memory systems in vocabulary learning
Obviously any learning that occurs is going to take place in the memory. It is, therefore, important to have a few basic ideas about how the memory works. We can distinguish three stages within memory. These are short-term or perceptual memory, working or processing memory, and long-term or permanent memory. Although these work together to comprise the entire system of memory, they also work differently. In essence, perceptual or short-term memory holds a brief impression of a sense coming in from any or all of the five different sensory channels. It is short in duration and limited in scope. Short-term memory can only hold limited amounts of information for a short period of time. Information that is held in short-term memory is able to affect what is stored in long-term memory, our unlimited, permanent store of information. How information we have perceived is registered in long-term memory is affected by working memory as well. Working memory, also known as processing memory is the system we use for retrieving, holding and making use of information. Working memory in many ways is the interface between short-term and long-term memory. It helps us move new information from short-term to long-term memory in reception and it also helps us information out of long-term memory for use in production. It does this by having us process and work with the information. Although it takes quite a bit of energy we can hold onto information and working memory as long as we need it. So, for example when someone is reading, they need to hold onto the forms at the beginning of a sentence as a read through the rest of the sentence in order to get the meaning of the entire sentence. So working memory holds onto forms but also holds onto meaning as long as we think we need it. Working memory, however, is also very strongly affected by the
nature of long-term memory because working memory is what is used to retrieve things from our permanent store. If that permanent store is poorly organized and not very strong with weak and disparate connections, then it will be very difficult to find the items we are looking for. If we can't find the items we are looking for within a given period of time, then they will simply disappear from our short-term memory and while we have worked quite a bit very little will actually happen to our system regarding system building.

Looking at memory systems from a different perspective that processes involved, we can posit three different stages in the process of learning information. These are encoding, storage, and retrieval. Always operate, in the end, on long-term memory, but they are, as we shall see, strongly affected by the other types of memory. Encoding is when new information is burned into the long-term memory. Encoding is reliant on the type of information in the amount of information coming in from short-term or perceptual memory. We can describe information as being either strongly or weakly encoded. As we mentioned in class on Tuesday, learning is a physical and we see this very clearly what we think about encoding. In order to encode something more strongly much more energy is required. The amount of energy involved in the encoding process energy is generally raised or lowered based on our emotional state. So, for example, when people hear taboo words for the first time and they realize that they are taboo words, they often encode these very strongly even with just one hearing based on the strong emotive characteristics of such words. Encoding can be described as being strong or also being good. Good encoding leads to better storage based on the idea that if something is encoded well, it is encoded not just with a form, but also connections to other things in the context and maybe the context of the situation. Good encoding basically means that a form is encoded with ready-made connections. Storage is all about the amount in the strength of connections both to and from a particular bit of information. The more connections and the stronger those connections are, then the better we say a word is stored. Good storage is important for retrieval. If the word is not stored well then it is very difficult to retrieve. As I'm sure you're all aware, long-term memory is a massive storage depot. Having many things there is not the issue nearly as much as how those things are stored. Information is only useful if we can find it and retrieve it.

There are several residual factors about memory that are very important for vocabulary learning. The first of these is that encoding is an ongoing process. We have said that vocabulary learning, in its very nature, is incidental. This ties in with the idea of encoding. We don't simply encode a word and then are done with it. Learning a word entails multiple encodings or re-codings. Every time we are exposed to work and every time we use it we alter a little bit the information that we have stored in relation to that word. In effect, this new information becomes encoded within the larger network related to that item. This is what multiple exposures does for us. This re-coding also allows us to build more connections and strengthen the connections that we have already built, thus improving storage. Particularly when a word is strongly encoded, due to attention limits, this allows us to focus more attention on the context around the word and this leads to better connections and storage. When thinking about retrieval we need to return to the idea of directionality in those connections. As we discussed quite some time ago when we were discussing the lexicon in general, it was claimed that connections are not bidirectional. This means that when we are retrieving items for use we are making use of different connections than the ones that we have used to encode the item in the first place. Working memory plays an important role in helping us to build these new connections. Following this idea, it should become apparent that in order to get students to use words they need to actually at the practice using the word. It is only through attention use that such connections that ultimately allow us to use the word quickly and easily are developed.

Passive and active vocabulary
We can see how directionality of connections correlates to the differences between
passive and active vocabulary. The difference between the two is not merely quantitative, related to the amount of knowledge by type, but is also qualitative regarding the type of connections. Passive vocabulary is usually thought of as words that are much lower frequency and this is something that does affect how much we know about them and how well we know that. But of course this is not fixed. The general trend in learning is that we move from passive to active knowledge and use of a word. To be sure, passive knowledge of a word required less information and information types. And as with anything the type of knowledge we have represented is based on our experience or encounters with the word. Words that are encountered in solely in spoken language may not develop graphemic representations and vice-versa. The connections will also be different. We may have a lot of information strongly linked to a passive word but those links or connections only lead us into the item, not out of it.

For active vocabulary we need to try to build new links between what we already know so we can make use of that information and this is done by actually using the word. This typically involves making connections between the new item and pre-existing knowledge within the entire system and this includes knowledge and forms in the L1. This means we do not have to wait for a long time before we try to do things with the L2. We can start using the L2 on the basis of connections made to what we know about the translation equivalent in the L1. This of course will lead to some strange productions in the L2 but that is part of the process. With feedback and reflection on use as well good models in input, and more and stronger connections made not only from the L1 from to the L2 uses, but from L2 to L2 based on new L2 patterns as well, the use of the form will continually develop. So, it seems that we need to try to make connections both to (for reception/passive) and from (for production/active) the new item and this means building an L2 system. But, it is also important to recognize the facilitating role of L1 lexical knowledge in this process.

Incidental and explicit learning
There are a few basic ideas that we need to keep in mind when thinking about incidental and explicit learning. First, learning is an incremental and also an internal physical process. Teachers cannot control the way students learn. Just because a teacher is presenting a vocabulary item overtly does not mean that students are learning it explicitly. Students determine themselves how they will process a word and their internal states determine how it will be learned. So, whether students learn incidentally or explicitly is not for teachers to determine although they can affect the process by trying to help the students focus attention in certain ways on certain bits of information. Since we also know that learning is an on-going incremental process, it is safe to say that the learning of a given word is going to involve both incidental and explicit processes with more emphasis on the former. That is a given, provided we continue to learn more about a word over time and it is probably good that we use both.

It is generally agreed that a certain amount of overt learning of vocabulary is necessary. This is because by already having some familiarity with the words in a text one then has the attentional resources available to deal with the unfamiliar elements. Knowing allows us to learn. The more you know the more you can learn in a more incidental way. Schmitt advocates teaching overtly the most frequent 2,000 to 3,000 word families. This allows the learner to then be more autonomous in their linguistic behavior. Again, incidental learning is most useful when the learner is able to focus attention and therefore notice the context as well as the co-text surrounding lexical items. This also helps dramatically in the noticing of MWUs because readers with enough word knowledge and therefore spare attentional resources can read in chunks and not single words.

So, the basic idea is that a little overt treatment of vocabulary can go a long way if we choose the right types of words and aspects of those words to deal with overtly. Doing so facilitates the entire learning process.
Learning of meaning and grammatical patterns
We can start this discussion with a simple question?
Is all word learning driven by perception?
Of course the basic answer to this is yes. All we know has somehow started with what we have perceived. But that is a somewhat simple idea because we are able to take what we have perceived and learnt through perception and apply it to different areas. This is particularly true in the area of meaning and grammatical patterns whether morphological or syntactic. So, for example, if we have perceived the pattern of -s pluralization enough we can apply it to words although we may not have perceived the plural form yet. This occurs on the basis of similarities. If a pattern applies in one place we can try to apply it to a similar place. This kind of extension and application of patterns to new, but similar situations occurs within use. In this way students need to be able to extend patterns and change patterns based on what they have perceived elsewhere and apply it anew.

MWUs in vocabulary learning
For MWUs (multi-word units) often the big question is how we integrate them into our vocabulary learning/teaching. This often comes down to a question of when. Do we learn MWUs first or last? In first language learning children tend to learn MWUs first as unanalyzed chunks. They learn them as wholes without knowing what the component parts are or even that they are made up of smaller bits. So, for example, an MWU like what is that is learned first as an unanalyzed chunk like whuzat. Only later does the child learn the parts and the syntactic pattern in the chunk. For the additional learning process and especially in a foreign language situation students almost always learn single words first. It is only much later that MWUs are learned and often only as an interesting oddity in language. In this case there are good reasons to follow L1 learning and try to get students to learn MWUs in addition to single items and right from the start. The ability to recognize and use MWUs speeds up processing speed and increases accuracy. It is, therefore, important that learners are exposed and encouraged to use MWUs early on with the language.

Learning strategies
All good learners make use of strategies that help them learn better. The trick to this is developing a varied repertoire of strategies. The learner needs to know which strategy or strategies to use in different situations. Learners need to understand what strategies to use and why they are used.