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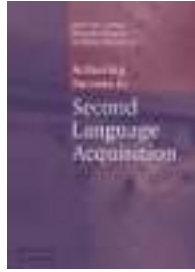
Achieving Success in Second Language Acquisition

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Chapter

2 - Understanding the role of cognition in the learning process pp. 38

-64

2 Understanding the role of cognition in the learning process

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Preview

This chapter introduces you to the science of learning – in this case, as applied to learning foreign languages. While we do not yet know everything about how the brain processes foreign language and builds proficiency, much is known and much more is being discovered every day. Topics that this chapter will address include:

- **Cognition**. Cognitive processes will differ, depending on whether this is your first, second, or third language. In any case, you will fare better in your language-learning activities if you understand such concepts as coding and encoding and the difference between knowledge and proficiency.
- **Memory**. Memory has a number of components. These include sentient memory (or awareness), short-term memory, long-term memory, and working (or activated) memory. Activated memory is important for recognition, recall, and reconstruction of others' expressions and construction of our own (new) expressions. Good memory depends on memory strategies and body chemistry; both of these can be improved by learners.
- **Aptitude**. Aptitude refers to the ability to learn a foreign language, much of which may be innate or at least developed over a long time. Some students just seem to learn languages more easily than other students. There are a number of components of aptitude, and even students with low aptitude can learn a foreign language by being aware of their strengths and knowing how to compensate for their weaknesses.
- **Metacognition**. Metacognition is that which is "above" cognition. In other words, it is "thinking about thinking." Being aware of one's own progress, actions, and thinking processes can do much to improve language-learning success.

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Have you found this to be the case?

Cognition

Cognition, simply put, means thinking. There are many processes involved in thinking, and all of them are considered part of cognition. Some examples are noticing, paying attention, making guesses and hypotheses, monitoring what you say, interpreting what you read or hear, and so on.

38

Cognitive processes will differ, depending on whether this is your first, second, or third language. In any case, you will fare better in your language-learning activities if you understand the concepts behind the learning of foreign languages.

Aspects of cognition: second language vs. third language

There are some advantages that accrue in learning a third (or fourth or fifth) language over learning a second language. Students who are aware of what these advantages are can exploit them wisely.

A third language may be related to a language you have already studied (either your native language or your second language). If so, you have quite a head start, especially if you do not overgeneralize. For example, the L3 grammar may be very close to what you already know in L1 or L2 grammar. In this case, your greatest challenge will be not to make the assumption that *all* the grammar is the same and to keep your eyes open for subtle, as well as gross, differences in the linguistic systems of L1, L2, and L3 (or L4 and/or L5). Let's consider a concrete situation:

> In Spanish and Portuguese, tenses are generally the same, yet some of the difficult moments for students of English who are studying both languages, such as the choice between two different verbs expressing to be, *ser* and *estar*, are intensified in that Spanish and Portuguese sometimes use these verbs in the same way and at other times where Spanish requires *estar*, Portuguese requires *ser*. The tendency of the learner who has learned Spanish as a second language and is learning Portuguese as a third language is to overgeneralize the Spanish rules to Portuguese – and in this way to make some kinds of mistakes that learners of Portuguese as a second language might not. Similarly, students of Portuguese can make the same erroneous overgeneralization when learning Spanish.

Another advantage in studying a third language that is related to a language you already know is that some of the vocabulary will look and sound similar, creating a sense of instant familiarity. However, you may tend to overgeneralize and use words from the second language in the third language, marking your speech as anglicized (if English is the source of influence), gallicized (if French is the source of influence), and so on. To avoid this, look for generalities you can make about the differences; these generalities will allow you to acquire a large reserve of vocabulary very rapidly. Again, let's take a concrete example:

> Many French words ending in *-tion* are the same as the English words, except for pronunciation. (This is a result of historical influences of French on English, dating from 1066 and the days of William the Conqueror.) Similarly, you might notice that these words are often the same in Spanish, but that they end in *-ción*. However, not all English words that end in *-tion* end in *-tion* in French or *-ción* in Spanish.

Table 2.1

Language family	Languages
Afroasiatic	Amharic, Arabic, Berber, Egyptian, Hausa, Hebrew
Altaic	Altay, Azeri, Bashkir, Chuvash, Japanese, Kazakh, Korean, Kumyk, Kyrgyz, Manchu-Tungus, Mongolian, Tatar, Turkish, Turkmen, Uyghur, Uzbek, Yakut
Austroasiatic	Khmer, Vietnamese
Caucasian	Chechen, Georgian
Dravidian	Tamil
Indo-European	Afrikaans, Albanian, Armenian, Bosnian, Bulgarian, Catalan, Croatian, Czech, Danish, Dutch, English, Flemish, French, German, Greek, Icelandic, Italian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Yiddish
Indo-Iranian	Baluchi, Bengali, Dari, Farsi (Persian), Hindi, Hindustani, Kurdish, Ossetic, Marathi, Panjabi, Pashto, Urdu
Malayo-Polynesian	Hawaiian (Polynesian), Indonesian, Malay, Maori
Niger-Congo	Dinka, Fulfulde, Ganda, Gikuyu, Shona, Swahili, Twi, Yoruba, Xhosa/Zulu
Sino-Tibetan	Amdo, Burmese, Chinese, Horpa, Pao, Pumi, Sajalong, Tibetan
Tai/Daic	Lao, Nung, Tho, Kam-Sui, Shan, Thai (Siamese), Yuan
Uralic	Erdzya, Estonian, Finnish, Hungarian, Ingrian, Karelian, Khanty, Kola, Komi, Lapp (Saami), Livonian, Mansi, Mari, Moksha, Mordvin, Skolt, Udmurt, Veps, Votic

What language families do your TLs belong to? Any similarities with previous TLs you've studied? Is that helping?

You will encounter more items in common, including basic roots, if you study a language in the same language family. Thus, if you study Russian and already know English, both of which are Indo-European languages although not closely related, you may not immediately recognize similar words, but you can use the roots of words to your advantage (roots are often similar throughout the language family, even though the words themselves have developed differently in each of the languages). Thus, knowing that _video_ in English has to do with seeing something will help you understand the word _videt'_ (to see) in Russian. Similarly, the English word _visual_ shares a root with the Russian word _vizhu_ (I see). Table 2.1 identifies some basic language families and their members (it is not meant to be inclusive – there are over 100 language families with, in some cases, many members – but to show you some of the relationships that you might encounter in your language study). Within individual language families, there are branches, for example, the Romance branch (Latin, French, Italian, Portuguese, Romanian, Spanish, etc.); within the branches, the languages are even more alike and, in some cases, mutually intelligible.

Even if your third (or fourth or fifth) language has little in common with any other languages you have ever studied, you still have a head start because you already have developed a set of strategies to use in language learning. For example,

- You know how to figure out the meaning of new words based on the context in which you see them.
- You know how to figure out grammar rules by seeing specific forms in several contexts.
- You know how to ignore what you don't know yet and use what you do know in order to decipher meaning.
- You know the kinds of actions you need to take in order to remember vocabulary and grammar rules.
- You know what to do in order to communicate with a native speaker – both when you know all the expressions you need and when you do not.

This is just a little of what you already know if you have studied a language before. If you think about it, you have quite a full toolbox of implements for use in learning yet another language – and the more languages you study, the bigger that toolbox of strategies becomes. (See chapter 3 for more information about learning strategies.)

Does everyone who studies a language acquire these strategies? Seems to be conflating 'good language learner' with all language learners.

Aspects of cognition: knowledge, accuracy, and fluency

There is a considerable difference between knowledge and speaking accurately and fluently. For example, you may well know a lot of grammar rules and words. This information is considered knowledge. It is in the background of your ability to communicate, but it rarely results directly in communication.

The amount of information you have does not determine your level of fluency, or even accuracy, in a foreign language. In other words, it is not what you know that counts in foreign-language proficiency, it is what you do with it. There are people with very limited knowledge of a language who are able to negotiate all kinds of things in the language with native speakers. Other people know a lot about the language, but fail miserably if asked to accomplish something that requires real communication, such as negotiating a contract, because they have almost no fluency. You probably have met both kinds of people – those who know a lot and can accomplish little and those who know little but can accomplish a lot.

For proficient speech, knowledge is just a stepping stone to being able to use the language – and some learners actually develop the knowledge from the experience of using the language and not vice versa. What is specifically needed for proficient speech (and understanding) is a combination of accuracy (saying things correctly and understanding them the way speakers or writers meant them) and fluency (speaking with a normal tempo).

CASE STUDY

Problem

Jacqueline has studied Japanese for a number of years. Now, she is studying Korean, and she gets confused a lot. When the words and grammar are similar, but not exactly the same, she forgets which is which, and Japanese begins to encroach upon her use of Korean. As a result, Jacqueline has decided to try to forget her Japanese while learning Korean, as she is afraid that it will interfere.

Possible solutions

The real problem is that Jacqueline is using her knowledge of Japanese in a negative way, not a positive way. Instead of trying to learn Korean as an independent language and, thereby, starting from scratch – which allows Japanese to seep into the learning process in distractive ways, Jacqueline should consider her knowledge of Japanese to be an asset and begin to look for ways in which it can help her with Korean. She can control the negative influence and bolster the positive influence of Japanese by doing the following:

(1) Change the way she looks at Japanese from being a nuisance and source of confusion to being an advantage;

(2) Find the patterns of similarity between Japanese and Korean words and grammar that she already knows, then try applying those to new Korean communications to see if those patterns can be generalized;

(3) Analyze the situations where she has overgeneralized – determine whether there are commonalities among them that she can avoid in the future; and

(4) Accept the fact that occasionally she will overgeneralize, applying patterns from Japanese to Korean not only in cases where the two languages match but also in cases where they do not match – that this is not a fatal mistake (and often may not even interfere with being understood).

Figure 2.1

Aspects of cognition: memory

Researchers and cognitive psychologists have developed a number of classifications of memory that can be helpful to the foreign-language learner. Further, as time goes on and more research is accomplished, we gain better insights into how memory works, what role chemicals play, and what happens to information once it enters memory.

Psychologists look at memory in several ways – and at the possible taxonomies of memory types. Some of these taxonomies are discussed below.

Episodic, procedural, and semantic memory

One way of looking at memory is based on what kinds of information the memory works with. In this taxonomy, there are

- episodic memory (remembering events, such as what happened at a party you attended two weeks ago);
- procedural memory (developing habitual processes, such as driving a car or riding a bike); and
- semantic memory (remembering content information or linguistic elements and their meanings).

All three kinds of memory play a role in language learning, with semantic memory usually considered the most important, because it is in fact memory for language. However, you need episodic memory to store learning events and procedural memory to make what you learn automatic (a key to fluency). Remembering grammar rules and developing a knowledge base about your language will require semantic memory. All of these kinds of memory work together to make you a good language learner.

How have you used these three types of memory in your learning?

Attention and awareness

Attention and awareness are often referred to as sentient memory. This is the very first step in the process of storing information in memory and making it available for later use (Cowan, 1997). For example, if we do not notice something – such as the color of the sky as we walk to class – there is no way that we are going to be able to tell someone later about it (i.e. to recall it from memory) because it never entered our cognitive system to be stored (D. Broadbent, 1982; D. E. Broadbent, 1952, 1958). (We will see in chapter 3 that there are some learning styles that take advantage of an ability to absorb some such information without conscious knowledge of doing so, but usually there needs to be at least awareness that the phenomenon to be picked up exists and is of some importance.)

Beyond simply noticing (paying attention), we normally have to understand something we hear or read in a foreign language in order to remember it later (i.e. we must be aware of what it means). Yes, we can sometimes repeat strings of words we do not understand in choral drills, and we can sometimes remember, even for years, a word that we did not understand (and years later some situational context finally makes the meaning clear). We can, in fact, remember many things without understanding meaning: intonation, sounds, rhythm, sometimes entire songs. These are, however, isolated moments and no more than the tip of the iceberg in language acquisition. Generally, if we do not understand something in another language, we are not able to remember, let alone reproduce, it later. Since there is no understanding, there are very limited ways to store the information, which generally needs to be linked with other knowledge and schemata (systems of knowledge) that already exist in our heads (Piaget, 1967; Piaget and Inhelder, 1973).

How sentient memory works and whether it is a prelude to short-term memory store or whether there are two parallel initial entry ports into long-term memory – sentient memory for information that can appeal to the senses and short-term memory for the abstractions, both of which are also referred to as transient memory

(Cowan, 1997) – are areas that neuroscientists do not yet agree on. What kind of rehearsal is needed, how much, and its effectiveness are also hotly debated by psychologists working in the area of memory today. What seems to be clear is that sensory memory is very short – from a few milliseconds up to twenty seconds and cues directed toward information perceived via the senses can create recall of the larger picture, whether perceived visually (Turvey, 1973) or in an auditory manner (Massaro, 1972).

So, what does this mean for you, the foreign-language learner? Until we learn more, it would appear beneficial to do all of the following:

- pay careful attention to the environment in which you learn language elements;
- pay attention to as many aspects as possible of the language you hear and see;
- try to use as many senses as possible in learning a new language; and
- attempt some sort of rehearsal.

The latter, rehearsal, is something you do all the time. For example, you may "rehearse," by repeating a telephone number aloud or silently a few times in order to fix it in your head. The same tricks that work to store general information in your brain (i.e. to move it into long-term memory store, which can last from minutes to months) can work when learning a second language.

Short-term, long-term, permanent, and working memory

Short-term, long-term, and permanent memory are what psychologists call *memory store*. They are less a "place" than an "action." Usually, cognitive processing that involves these three kinds of memory is considered to begin with sentient memory, as described above.

Once information is in some form of transient memory, it is either lost forever or transferred to long-term memory through a two-step process (from sentient to short-term to long-term) or a one-step process (from sentient or short-term to long-term), depending on the view of memory processing. Losing information will be discussed a little later in this chapter. The important things for you, as a language learner, to know are that:

- some information/language can and should be lost (otherwise you will be overwhelmed with too much information that you cannot sort through), and
- paying selective attention to the things you want to be able to recall will do much to make sure these items reach your long-term memory.

Then, for memory to "work," these memory stores must be activated. That activation is accomplished via working, or activated, memory. Let's look at each of these in a little more detail.

Short-term memory

Short-term memory is a holding tank of up to twenty seconds, in which information is rehearsed long enough to be sent off to long-term memory. An example would be holding a phone number in your head long enough to dial it – after which it is forgotten. Another example is listening to a teacher give a brief explanation of an odd word. Once the teacher moves on to something else, the information about the word will be forgotten unless it is moved to long-term or permanent memory.

Moving information from short-term to long-term (or permanent) memory

Moving information into a longer-lasting memory store can take place in several ways. Sometimes an association with other information in long-term or permanent memory will be made, and this "binding" of new information with old information can become a short-cut to permanent memory for the new information (Terrell, 1986). Here is an example:

> One of the authors wondered for many years what a *tygach* was in Russian. The translation always was "prime mover," but she did not know what a prime mover was in English. So, while she was able to translate these words back and forth between the languages, she had no idea what she was saying – until one day at an airport, she saw one of the little machines, a prime mover, pushing the plane away from the gate. That was an "Ah-hah!" that she will always remember and be able to retrieve from memory easily because the experience connected brand-new information (a visual rendition of a prime mover) with the verbal information already in permanent memory.

One of the reasons that cognates (words that are similar in two languages) are helpful in learning a new language is that they connect short-term memory to permanent memory in one fell swoop: if I am an English speaker, for example, it will be easier for me to remember the word for information, *información*, in Spanish than it will be for me to remember the word for city, *ciudad*. The first is almost the same as the word I already know, and if I read it, it will be even easier than if I hear it because I may not yet be familiar with the differing sounds of the phonemes (see chapter 6 for a definition, if you do not know what a phoneme is) and the differing patterns of stress between the two languages. Similarly, learners can help create a shortcut to permanent memory by associating sounds of new words with sounds that already have meaning for them, even if the grammar is not equivalent. Thus, in Arabic, someone named John could introduce himself, saying *Ismee John*, or *My name is John*. Trying to remember *ismee* (name) will be much easier if John associates it with similar sounds in English: *(it) is me*. There is no end to the ways in which such associations can be made in order to improve memorization.

What kinds of associations have you used to remember something in your TL (to move it from short-term to long-term memory)?

Long-term memory

Typically, long-term memory lasts up to three years. An example of long-term memory is the information you learn for a test and forget the next day or the next semester. Long-term memory generally holds information that you need right now and for the next little bit, but unless there is further use and repetition (i.e. further need for use), this information will not stay with you for a lifetime. Information can be lost from long-term memory through trace decay (one loses the thread of the information), stroke, and other things that interfere with retention. (We will discuss some of these kinds of interference later in this chapter.)

What this means for you as a language learner is that you need to use what you have learned and you need to have many opportunities for reading the same kinds of things, hearing them, speaking them, and writing them over a long period of time. You have probably heard some of these sayings:

> Use it or lose it.   (American proverb)
> Povtorenie – mat' ucheniya (repetition is the mother of learning). (Russian proverb)

You can create non-boring opportunities for repetition and prevent language loss through initiating conversations on similar topics with a range of conversationalists. You can also find some topics of interest to you and read as much as you can on those topics, then write a letter to someone about what you have been reading or write a report on it for your class. Consciously making an effort to return to topics you have not concentrated on in a while will help you keep the vocabulary and grammar associated with them fresh in your long-term memory; at some point, they will become part of your permanent memory store.

Permanent memory

Permanent memory lasts, theoretically, forever, though it may become latent, requiring refreshing and activation when needed. (This is often the case for knowledge you have not used for quite a while but which never really goes away.) What remains and what disappears may be very situational and very much dependent upon individuals. The more information that gets into permanent memory, however, the easier it will be to recall the information you need – even after a hiatus in using it. Research, for example, as well as much personal experience of teachers who work with students who have high levels of foreign-language proficiency, indicates that students who surpass professional levels of proficiency and approach near-native levels can bring back their skills very, very quickly, even if they seem nearly tongue-tied during the first hour or two that they try to talk or write (Leaver, 2003a). (Receptive skills – reading and listening – seem more accessible than do the productive skills, and that makes some sense. If you have not ridden a bike for some time, when you first ride again, you may need to reorient yourself to bike riding; at the same time, receptively you know what it is all about before climbing back on the bike.)

We talked about how association of new information with permanently stored information can move the new information into permanent memory faster. The reverse is also true. New information is more accessible and short-term memory tasks more readily accomplished if some of the "new" elements are similar to or the same as elements in permanent store (McCauley, Kellas, Dugas, and DeVillis, 1976). What this means is something that is probably good commonsense: if you read or hear a passage in which you already have acquired 80 per cent or more of the words, it will be easier to learn the other 20 per cent than if everything in the passage is new. This is another reason to do extensive reading and listening on a limited range of topics. The more you read within one topical domain, the more likely it becomes that each new reading will contain relatively fewer new words or grammar points.

Activated (working) memory

Activated memory is sometimes called *working memory*. Activated memory is the activity of pulling together information from short-term, long-term, and permanent memory store for the purpose of processing information. Processing activities generally consist of one or more of the following:

- recognition
- recall
- reconstruction or
- construction of information.

In order to recognize words, grammar, or ideas, we need to have related information about them stored in memory already. Activated memory pulls up this information so that we can use it in a variety of ways, such as using context to guess the meaning of a new word or using background knowledge about a topic to figure out the gist (general meaning) of a text.

Activated memory pulls together the pieces of information that we need at the time. It is pretty rare that we recall information as a whole. This is because information is not generally stored some place as a whole. Rather, specific characteristics are "peeled off" and linked to similar kinds of information. Thus, information about the color of an object would be more likely to be linked with information about color about other objects. Size information would more likely be bound to other size information. Or, at least, so contend contemporary psychologists (Reiser, 1991). Even in sentient memory, for immediate recall, categorization seems to be significant (Greene, 1986; Greene and Samuel, 1986; Morton, Crowder, and Prussin, 1971). What this means for you as a language learner is that it will often help you to group lexical items for learning by different characteristics. Multiple groupings will provide multiple associations to help them stay in long-term memory. Also, thinking about related things can sometimes stimulate recall. For example, if you are trying to remember the word *ball*, you might group it with other words for toys, with words that start with the letter *b*, with words that rhyme (*fall*, *hall*, *mall*, etc.), or, even better, all of these.

In processing language, we do something beyond simple reconstruction. We make up new sentences and even occasionally new words. That would be considered construction, or generation. How does this happen? We recombine stored information in new ways.

Aspects of cognition: forgetting

Understanding why we forget is every bit as important as understanding why we remember. Both help us become better learners. In fact, forgetting is, surprisingly, essential to good learning. This is because if you forget something you have learned, you can relearn it in a somewhat new context, and it will be combined with traces of the previous learning. Forgetting is also necessary when you are overwhelmed with new material to learn. It's like a storm drain: it prevents flooding.

There are a number of things that can go wrong in the storage, recall and reconstruction process. When they go wrong, we simply do not have access to the information, whether we know it or not (the "it is right on the tip of my tongue" phenomenon) or knew it and lost it. Some of the things that can go wrong are retrieval errors, lost data, and overwritten information. Each is described below, and the reference list at the end of this chapter provides additional reading for those interested in more detail.

Retrieval errors

Retrieval errors occur when you know something but just cannot seem to remember it. You have probably experienced retrieval errors before – not just in foreign-language classes but in other subject areas, too. The answer may be on the tip of your tongue, but you just cannot get it to come out right. This is pretty normal, and while it is frustrating, there is little that you can do about it (at least until psychologists do some more research in this area and come up with some aids), so you might as well shrug it off and find an alternative way to say what it is you had in mind. Since the expressions *are* in your memory somewhere, if you do not obsess about what happened, you will most likely be able to recall the "forgotten" item the next time you need it. If you just cannot let go of the fact that you do *know* the word or information you are after, sometimes association will help: where did you hear the information, what else is related to that information, what even might sound like the information? All the ways in which you use association to store information in long-term or permanent memory can work in reverse to help you recall it. If you are in the middle of a conversation, however, you will need to decide whether it is worth the time and trouble to do that right now or whether a circumlocution or paraphrase would work best to keep the conversation flowing. If you know the information, it will come to you later – isn't that always the way? – and you can reinforce it for the next time by using it in a number of new situations so that there are even more associations that you can make when you next need it.

Lost data

Sometimes information really is lost. This may be because it never made it into permanent memory in the first place. Perhaps it did not stay long enough in short-term memory and the "trace" of the information decayed to the point that it became unrecoverable. Perhaps it did make it to long-term memory, but was not used enough and had no associations to place it into permanent memory. In any event, lost data must be relearned; it will not show up again in the future on its own. In some cases, part of the information may be remembered. Then the relearning is much faster than the original learning. You will lose data from your language banks from time to time; that is to be expected. Just take this situation in stride and relearn the information. Even the best language learners experience this situation from time to time.

If you do not study or use your foreign language for a long period of time, whole chunks of data may seem to be lost. In some cases, they are lost, and they must be relearned, but relearning rarely takes more than a fraction of the time of the original learning. In other cases, the information is not lost at all, but the pathways for retrieving via activated memory may be hard to find because they have not been used recently. Once found, however, more and more intersecting paths will become accessible very quickly. Most language learners who had good proficiency in a language that they have not spoken for a number of years can reclaim that language in pretty short order.

One of the authors of this book had this experience. Having achieved native-like proficiency in French, she did not speak, hear, write, or read a word of French for twenty years. Suddenly, she needed good French proficiency almost immediately. It took only fourteen hours of intensive study with a native speaker to open up almost all the closed pathways – at least, enough of them for her to be able to use French at a professional level. Another had a similar experience: decades after learning French and Spanish in secondary school, she was called on to travel (on separate occasions) to France and Spain. In both cases, she was amazed at how much returned when she spent fewer than ten hours in conversation with a native speaker. She was able to function comfortably in both countries and continue learning.

Have any of you experienced the relearning of information that seemed lost?

Overwritten information

Memory researchers have found that human memory has a number of characteristics in common with computers. One characteristic in particular is unfortunate: new information can overwrite (i.e. eliminate) old information. Some well-known studies have been made of people who witnessed accidents or historical events but later changed their testimony without even realizing it. What caused this was the introduction of distorting information, for example, a question such as: what did you see next to the white house? (Only there was no white house.) Later, people remembered a white house that never was there. Human memory is now considered so unreliable and so prone to being overwritten

memory processes

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+-----------------------------------------------------------------------+
|                        attention                                      |
|                                activated memory                       |
|                         |              |           ------- retrieval  |
|                         |              |                   error      |
|                                                                       |
| short-term memory ----- long term memory ------- permanent memory     |
|            |                        |                |                 |
|     |             |          |                                        |
|  trace decay  overwritten association                                 |
|               information  failure                                    |
+-----------------------------------------------------------------------+
```
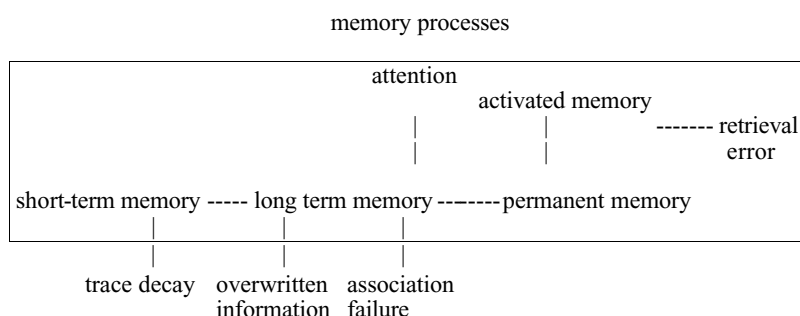
Figure 2.2

that many states will not allow the testimony of eyewitnesses alone to serve as evidence in court cases (Luus and Wells, 1991).

If some of the information you learn in language class is overwritten by new information (e.g. after you learn the past tense, you find that you have forgotten present-tense forms), there is nothing to be done except to relearn the old information – without blaming yourself for having a bad memory. The memory itself is not at fault here; it is normal for related information to overwrite information that already exists. One way to prevent this from happening to you in language classes is to repeat old information (e.g. continue to use the present tense on a regular basis) while learning new, related information. That way, your brain should perceive both elements as distinct pieces of information and not overwrite one with the other.

We would be remiss not to point out a positive aspect of overwriting information. It is fortunate that this phenomenon happens, especially in language learning, because we can continually overwrite previously learned inaccurate or inadequate language on our way to being more precise.

Aspects of cognition: memory strategies

There are a number of strategies that can help the brain function more efficiently. These include directed attention, repetition, association, clustering, key words, and mnemonic devices, to list just a few. All of these have been discussed above, but we will look at them in greater detail here.

Directed attention

Directed attention, sometimes called selective attention, lets you focus only on the information that you need. This is a blessing because if you are reading an article or watching a film in your foreign language, especially when proficiency is not very advanced, there are probably many words and expressions that are simply meaningless to you. Getting "stuck" on each new word is not an efficient use of your time. Nor is using the dictionary to look up everything you do not understand or know. Using the strategy of directed attention requires

that you decide ahead of time what you want to learn from what you are hearing or reading and to look for that information specifically. It also lets you pass by whatever you do not understand and focus on what you do understand. Piecing together the elements that you do understand can often help you get the gist of an entire passage.

Practice and rehearsal

Sometimes you just cannot get past the fact that memory needs rehearsal and practice. Before you go to meet a foreign conversation partner for coffee, think about the things you might talk about – and practice them in advance. You may end up with somewhat different topics, but some things will be similar or even the same, and the conversation will be much easier for you. You will also be improving your memory for these expressions.

There are times, too, when you just cannot seem to remember a particular word, no matter how you try. You see it in a passage. You recognize it as something you should know, but you cannot recall its meaning. In fact, you cannot even divine its meaning! Or, you hear it in a television show, and even the context does not help. In fact, you may need that word, in particular, in order to make everything else make sense. Or, someone asks you a question in which that word is the most important element, and you just simply cannot respond. Here is where repetition, repetition, repetition may help out. Repeat the expression at every opportunity. Make a game of walking to a rhythm and repeating the word or expression – especially if movement helps you learn (see chapter 3 for more information on kinesthetic learning). Come up with a rhyme for it that you then repeat *ad nauseam*. There is a funny poem about just this approach. A little girl had studied her "tables o'er and o'er and forward and backward, too," but she "couldn't remember six times nine and didn't know what to do." Her mother tells her to call Mary Ann, her favorite doll, "Fifty-Four" for a while. She does it and learns the answer to 6×9 with no trouble – except that when the teacher asks her the answer to six times nine, she unthinkingly responds, "Mary Ann" – obviously, by association. (See Fig. 2.3.)

Association

We have talked much about association earlier. This may be the strongest strategy you have for getting information into memory. It works faster and lasts longer than other strategies. Moreover, other strategies, such as clustering, key words, and mnemonics, have aspects of association. So, whenever you want to remember something new, find as many associations for it as you can. Listed below are a few kinds of associations that you might make. You can probably think of dozens more.

- Does it look (spelling) like anything you already know?
- Can you put a picture with it in order to remember meaning?
- Does it sound like anything you already know?

Fifty-Four

I studied my tables o'er and o'er and forward and backward, too,
But I couldn't remember six times nine and didn't know what to do
Till mother said to play with my doll and not to bother my head.
"If you call her Fifty-Four for a while, you'll learn it by heart," she said.
So I took my favorite Mary Ann though I thought it a terrible shame
To give such a perfectly lovely doll such a perfectly horrid name.
But I called her my dear little Fifty-Four a hundred times till I knew
The answer to six times nine as well as the answer to two times two.
Next day Elizabeth Wigglesworth who always acts so proud
Said six times nine was fifty-two, and I nearly laughed out loud.
But I wish I hadn't when teacher said, "Now, Dorothy, tell me if you can."
And I thought of my doll, and, sake's alive, I answered, "Mary Ann!"

Author unknown

Figure 2.3

- Do you already know any parts of the word or expression?
- Can you make up a rhyme or ditty that would go with it and use part of that ditty for recall?
- Are there any connections with other languages you know, including your native language?
- Can you associate it with a person, place, or thing that might assist recall?

Clustering

Clustering lets you remember whole groups of information by treating the group as one piece of information. For example, the numbers 18396745062 would probably be pretty hard to remember. There are ten separate numbers in a specific order. Research shows us that to remember this number, then, is beyond the capability of the average person, in that most of us have memories that can handle seven digits, plus or minus two (Miller, 1956). However, if you were to organize these numbers into the structure of a telephone number, it would be much easier to remember the full string: 1-839-674-5062. Now, there are only four pieces of information to remember, and within any group there is never more than a string of four numbers to remember. This makes the task possible. What makes the task even easier is knowing the "script" or format. All long-distance numbers in the United States start with 1, so that number makes sense and is already part of every American's permanent memory. Recall is immediate and effortless. Of the remaining three groups, 839 is an area code. It is pretty likely that the person memorizing this number is either familiar with this area code or lives in it. Again, this represents fairly effortless recall from permanent memory. The remaining seven numbers are a little harder, but often the first three of them are similar for an entire city, and if the person memorizing that number lives in

that city, this is once again an effortless retrieval from permanent memory. So, the real task boils down to remembering four numbers, and in this case, even that is easy. One really only has to remember 51 and the fact that the last two numbers are plus one: 6 (5+1) 2 (1+1). So, of ten numbers, the real memory task is two numbers and a formula! Piece of cake! Not all numbers will be this easy, and not all information will be this easy to cluster, but much will be.

Let's now take a verbal example, for which there are many approaches. To remember the word *ball*, you might cluster it together with words that sound alike: *call*, *fall*, *mall*. You might even make up a ditty that is somewhat mnemonic in nature (see Mnemonic Devices below): "I will call the mall in the fall about a ball." Similarly, let's say you want to remember the following ten words: *antidote*, *antecedent*, *antipathy*, *anteroom*, *antenatal*, *deformation*, *demobilization*, *deflection*, and *antiphon*. You could cluster these into three groups: *ante-*, *anti-*, and *de-*. You could even reinforce the meanings of these words, by seeing which ones can use synonymous suffixes, as in *antenatal* and *prenatal*, *antecedent* and *precedent*. You could also remove the prefixes, in your attempts at manipulation and clustering, to see which words exist without their prefix and which do not. Which ones can use the opposite prefix to change meaning? An example would be *postnatal*. Which ones take other prefixes that cause their specific meaning to change, while the basic meaning stays the same? Examples would be *immobilization*, *inflection*, and the like. You could go on and on with these kinds of clusters; as you play with the words, you will learn not only these words but also something about how your foreign language constructs words, along with many new related words.

Key words

Key words is a popular device for remembering long speeches (Lorayne and Lucas, 1996). These are words or short phrases that are used to remind the speaker of whole passages of text. The same kinds of things can be used to memorize speeches in a foreign language. Let us say, for example, that you need to talk about your biography frequently. You can memorize the phrases, sentences, and even full paragraphs of information, then recall how to string them together through the use of guiding key words, like "born," "school," "work," "travel."

Mnemonic devices

We have seen some forms of mnemonic devices already. These are the use of rhyming words or alliterative words (those that start with the same letter) to remember things. If, for example, you want to remember to buy five things at the store: cookies, ham, ice, potatoes, and sugar, you could select the word chips. Each letter in chips stands for one of the items that needs to be purchased.

You can use a similar strategy in learning words. Let us say that you need to remember the words *knockout*, *boxing*, *score*, *out*. Using the first letters of each of these words, you could use the nonsense word *boks* to remember these four words. Some learners find mnemonics complicated to use. If that is you, use other

strategies (described here and elsewhere in this book) to help you remember what you need to remember. Many people, however, find mnemonics fun and useful. Try using mnemonics for a while. You may find yourself in the group that really likes using this strategy.

Aspects of cognition: state-dependent learning

The research that has been accomplished on state-dependent learning can be very important information for language learners. What state-dependent learning theory (and research) tells us is that the context in which we learn new information can be important in helping us remember it (or preventing us from remembering it). For example, some students have problems taking tests if they are moved to a new seat. Part of the "state" in which they had learned the tested information was associated with the desk at which they were sitting when they were learning it. Similarly, those who have spent much time in-country will often claim that they speak better language in-country. They may well be right in that perception: part of the state in which they learned a rich and complex set of vocabulary was the in-country environment and the everyday realia. If you understand state-dependent learning, you can use it to advantage by recreating, as much as possible, the state under which you learned the new information originally.

Aspects of cognition: taking advantage of the chemistry of memory

Chemistry really does play an important role in the efficient functioning of activated memory. Putting the situation in simple terms, memory is moved about the brain thanks to glucose. The production and use of glucose (blood sugar) is facilitated by the chemical epinephrine, which is released by potassium, among other things. What does this mean in concrete, useful terms? If you eat a banana, your now-potassium-rich memory might improve. Any food that is rich in potassium (for example, potatoes) is a better choice for breakfast before a test than those foods that give you a quick energy boost (often, the energy disappears before the test is over). If the food you eat is high in sugar, it will temporarily increase your glucose level in an intensive way, insulin will be released to deal with it, and then the blood sugar level will drop – leaving you in a "crash," just when you need to be at your most alert. It is much better to eat foods that contain the chemicals that facilitate the efficient *use* of blood sugar, rather than to raise the blood sugar level itself, especially on a roller-coaster basis. In the same way, it is better to eat a complex carbohydrate, such as a bagel, than something that will release sugar immediately into the blood stream, such as chocolate. Also eating excessive amounts of glucose-rich foods in the morning is not an efficient way to handle your memory-related glucose needs; the best way is to eat moderate amounts throughout the day.

CASE STUDY

Problem

Sally always does poorly on tests. Although she really has studied in each case and really does know the new vocabulary and new grammar rules quite well, when she gets into the test room, she forgets it. When she walks out the door, however, she can usually remember what she should have answered on the test. How can Sally help herself do better on tests?

Possible solutions

There could be more than one reason for Sally's predicament. Sally might be experiencing test anxiety; she also might have an inefficient memory. In either case, there are steps that Sally can take.

(1) There are a number of ways that Sally can overcome test anxiety; one of these is knowing that she has done all she can to make her memory efficient; another is to learn all she can about the format of the test and practice that format ahead of time; yet another is not to cram for the test the night before but rather to study a little bit every night so that she develops good control over the materials well in advance of the test and can get a good night's sleep right before the test, allowing her body and memory to function at peak levels.

(2) Sally can assist her memory by eating a banana or potatoes before her test, nibbling on a bagel during the test, and avoiding foods, such as chocolate, that raise her blood sugar rapidly and then send it crashing, and coffee that provides temporary stimulation that wears off rapidly.

(3) Sally can use mnemonic devices for helping recall specific information.

Figure 2.4

One thing that many learners forget is that chemicals – and one's body – react to the internal environment. Processes slow down when tired. Cramming for an exam might make you feel that you are gaining important last-minute information but all too often that information will not be accessible to you on the day of the test because you are too tired for your brain to process the information efficiently. It is much better to get some good sleep the night before a test, even if you do not feel ready for the test, so that your brain can make efficient use of what you do know. Of course, it goes without saying, that the best way to prepare for a test is to start on the first day of class and learn a little every day! Then, right before the exam, all you have to do is to review.

Aptitude

How many people have you heard say, "I have no aptitude for foreign-language learning"? Maybe you are even one of them. Before you can evaluate the truth of such statements, it is important to know more about aptitude.

Defining language aptitude

Language-learning aptitude is often thought of as what is assessed by language aptitude tests (more about these below). For the most part, these tests address such cognitive abilities as making correspondences between sound and symbol, auditory discrimination (between sounds), native-language vocabulary, memorization, and linguistic analysis, especially inferring grammatical patterns from information provided on the test. There is increasing understanding, however, that current forms of tested language aptitude are only part of the picture when predicting learning success in foreign-language learning.

However, there appears to be more to effective language learning than the factors that are tested by aptitude instruments. Some of these non-tested factors are related to personality, learning style, and emotional factors, which are treated in subsequent chapters in this volume. These are not traditionally considered aptitude factors at all, yet they have much to do with language-learning success. Among these, tolerance of ambiguity (especially comforting in situations where you cannot understand everything) is a major element in language learning both inside and outside the classroom. For example, in a situation that demands rapid comprehension and response, even a learner who does very well on an aptitude test might freeze or panic at the first new words, missing everything that is said thereafter. With a greater tolerance of ambiguity, that learner would be more likely to keep listening until more information comes in and permits a good guess at the likely meaning. Similarly, a learner who tolerates ambiguity would be more likely to try out a response even knowing that it might not be exact.

There is consensus among some experts (Ehrman, 1998, Sternberg, 2003, Robinson, 2002) that more investigation is needed of variables representing a broader definition of language aptitude. In addition to tolerance of ambiguity, they could include such factors as previous learning history, motivation, and learning style. They recommend that these be investigated to supplement traditional tests and especially for use in counseling and advising students on how to make the most of their strengths and work around their less strong points as learners.

For the purposes of this book, the most general definition, which takes into account all the current and potential uses of language-learning aptitude, is that *it consists of relatively stable factors within an individual that promote successful language learning*.

Language aptitude testing

The best-known test for language aptitude is the Modern Language Aptitude Test (MLAT, Carroll and Sapon, 1959); it is used in universities and in the government for a variety of purposes, including selection for classes. Other aptitude tests that you might encounter include the Defense Language Aptitude Battery (Peterson and Al-Haik, 1976), the VORD (Parry and Child, 1989), the Pimsleur Language Aptitude Battery (Pimsleur, 1966), a language aptitude test

prepared some years ago by the Modern Language Association, five language aptitude tests produced by the collaboration of the University of Wales at Swansea and Leonardo da Vinci Programme of the European Commission in Brussels (Meara, Milton, and Lorenzo-Dus, 2000), and the Oxford Language Test, which was prepared by the colleges of Oxford University and is available online at www.sun.rhbnc.ac.uk/Classics/ CUCD/test.html. You should be able to find information about these tests online and/or in your university library.

discuss sample

Aptitude tests provide valuable information about learner ability to cope with language learning, especially in classrooms. Aptitude tests can provide considerable data about an individual's learning skills and learning styles. The MLAT, for example, evaluates skills and abilities related to auditory memory, making inferences, focusing on what is most important, cognitive restructuring of information, sensitivity to grammatical structure, and effective rote learning. This information has proved very useful in helping learners (Ehrman, 2000).

Language aptitude and you

In looking at your language-learning ability, think about *all* of your assets, not just the ones that show up on aptitude and classroom tests. Do you think fast on your feet? Are you good at making others understand what you want to say, even if it is not completely grammatically accurate? Do you listen well? Are you confident in your ability to solve problems, practical as well as academic?

If you have a low tested aptitude and no previous language-learning experience to indicate that the test score is not indicative of your ability, you may need to work closely with your teacher or other guide. Together, you can put your learning into a format that takes advantage of your strengths and compensates for your weaknesses (or builds the lacking skills) – what these are, in particular, will depend on your learning style and your study skills in general. Your teacher should be able to analyze your answers on whatever aptitude test you have taken and determine the areas in which you will need help. Language learning is not an arcane science, but it does take thinking, work, and planning.

The important thing to remember is that a language aptitude score is not an infallible diagnosis of whether or not you can or should learn a foreign language. Look at the skills required to do well on an aptitude test: holding sounds in short-term memory, comparing sounds and letters, understanding how grammar works, understanding how words are formed, and the like. All these things can be learned. Almost invariably, someone who has studied four to five languages does well on aptitude tests. Why? Because they have acquired these skills while learning the various languages. Not having these skills can hold you back, so finding out which of the skills you lack and developing that skill will go a long way not just to increasing your aptitude score but also and more important to improving your classroom and out-of-class performance. Many of the topics in this book are aimed at helping you do just this.

CASE STUDY

Problem

Robin is struggling with the first semester of Swedish. On the advice of the teacher, Robin has taken the Modern Language Aptitude Test, to see what the problem might be. It turns out that Robin's strengths are in auditory comprehension, word learning, and matching sounds to symbols. On the other hand two parts – (1) word recognition and assignment of a synonym and (2) grammatical sensitivity – were very low. What can Robin do about it?

Possible solutions

(1) Robin should examine the strengths the MLAT has revealed and work with the teacher to see how she can take advantage of these.

(2) Knowing that she has a weakness in spotting and mentally reorganizing what is important, Robin should work with the teacher to practice doing this with easy things at first (such as differences in word suffixes and prefixes), building up to more difficult ones (spellings that are in free variation, reading between the lines, even finding the topic sentence in a text – it is not always at the beginning in some languages, as it is in English).

(3) When she feels overwhelmed, Robin should find things about the language and its study that maintain her motivation, perhaps keeping a diary that elicits positive self-talk and records her successes.

Figure 2.5

Metacognition

Metacognition, as mentioned in chapter 1, is "thinking about thinking." It refers to being aware of your language-learning behaviors and progress, self-monitoring, and planning. Metacognition plays a very important role in language learning. Not only is it important for the long-term planning of learning activities, perhaps even throughout your career and/or life, but it is also important for ensuring the most successful use of your time during courses of study.

When we discussed planning in chapter 1, we were describing one of the most important metacognitive activities. Planning, or forethought, is just the first metacognitive step. In addition to planning, you will need to monitor and set priorities, two more important metacognitive strategies.

Monitoring

Monitoring refers to paying attention to what you are doing while you are learning. Tracking what you are doing permits you to remember it when it comes time to evaluate it. (The tracking doesn't need to be intensive, but you

have to pay enough attention to be able to recall something of what you did later.)

For example, when you are sitting in the classroom, are you paying attention to what the teacher is saying? What do you think the teacher will do next? How are you doing? Are you keeping up? Are you having problems? If you are having problems, what are you having problems with? If you can identify your problems, you can *plan* to work on them as part of your homework or you can ask the teacher for some additional help.

Monitoring your progress can provide tremendous insights into what you can and should do to improve your own success in language acquisition. Done well, it usually provides wonderful insights that you can use in any planning that you undertake. What should you monitor? Everything, including, but not limited to, the following:

useful for learner diaries

*   Your overall progress
*   Your specific successes (and any lack of success)
*   Your learning-strategy use
*   Your materials
*   Your use of time
*   Your feelings

Progress

As mentioned in chapter 1, there are expected rates of progress in acquisition for individual languages. How does your progress stack up? If you do not know, arrange to take a proficiency test. Slower than the average? See if you can find out why. What aspects of language learning are troublesome for you? Talk to your teacher. Determine whether your progress really is slow or not when you compare it to that of your classmates. It could be that the class is moving more slowly as a whole. On the other hand, if you are moving faster than others in your class and/or than the average expected, do not just pat yourself on the back. Find out what has helped you be successful and become even more successful.

Specific successes

Besides overall progress, it is important to know in what aspects of language learning you are succeeding well and where you are not succeeding as well. Evaluate the success of the language items you are working on. If you are focusing for now on the past tense, evaluate in general terms how fluently and how accurately you are using it. At a higher level, you might assess how well you are using the right register (social style level) for the people you are talking to. An advanced language user should not be using a register implying familiarity with high-status strangers, for instance.

Learning-strategy use

Every so often, you should evaluate the learning strategies you are using. Some of them may be no longer useful because you have learned new ones or because you have reached a level of proficiency where they no longer help and you need to develop new ones. For example, at lower levels, you may need to look up some words in a dictionary or guess their meaning from context. At higher levels, however, you might be able to figure out their meaning based on the meaning of their roots, your knowledge of word formation, and/or comparison with vocabulary that you already know.

Materials

Evaluate the materials you are using. Can you find better ones? Are you playing it too safe and using things that are too easy for you? Or are they too hard, so that you use too much energy for figuring things out or looking information up in the dictionary when, with different materials, you would need less time for these activities and could spend more time on the information itself, remembering the vocabulary, and exploring the grammar through application of what you already know?

Use of time

Take a look at how much time you are spending on your language-learning activities. In fact, you might want to keep a diary for a week in order to track your time use better. Total time is important, of course. If you are spending four hours in order to learn ten words, you may need a different learning strategy. Specific use of time is important, too. Where does the greatest amount of time get spent? On vocabulary? On grammar? On application? If you are spending more time on knowledge (grammar and vocabulary learning) than on use (application), you might want to reassess and see if you can find more opportunities for application. If all your time is spent on knowledge activities not by choice but by necessity, then your overall progress in learning the language may be affected, and you should examine what is holding you back. Take a look at the four skills, too. Do you spend more time speaking, reading, writing, or listening? Is the relative balance one that works for you? Would a different mix work better for you? Sometimes it is not *how much* time you spend studying that matters but rather *how* you spend time studying.

Feelings

Assess your feelings. Are you feeling discouraged? If so, take a look at why and think about how you can get yourself out of the doldrums. Are you feeling pleased and successful? If so, find ways to give yourself more of the same. Rewarding yourself for your successes – even when the successes are small – can be highly motivational.

CASE STUDY

Problem

Alex has been struggling with homework. The teacher is very helpful in class, guiding him and his classmates through the material presented, but he assumes that the students will know how to study the text and what has been done at home on their own. The teacher seldom gives explicit assignments, and Alex is sure he isn't using his time well. He feels he is drowning in new things to learn.

Possible solutions

(1) Alex needs to develop some metacognitive skills. He needs to work on planning (suggestions listed above will help him a lot).

(2) An especially important metacognitive activity is examining the whole field of what he has to do every day and selecting only the most important things. He should select the three most important things, and then the next three. When he finishes the first set, he can then move on to the next set.

(3) Even if he is a learner who likes to organize things for himself and feels restricted when forced to learn things in a step-by-step manner, he may benefit from taking a relatively sequential approach here because he needs to limit what he attends to and stick to one thing at a time.

(4) While he is developing these skills, he should consult with his teacher to confirm his priorities.

Figure 2.6

Setting priorities

Setting priorities is just as important in language learning as it is in many other aspects of your life. Setting priorities will be far more effective if you base your priorities on the results of monitoring and evaluating. If you find, for example, that you are weak in speaking and yet you spend less time on speaking than on the other three skills, you might want to make opportunities to speak a higher priority in your learning plan.

Setting priorities may also lead to redoing your learning plan. This is not bad; this is good. Learning plans should be redrawn periodically. In fact, if you apply the metacognitive strategies described here, you will find that metacognition is the key to independent learning. It is the essence of what is called "self-regulation" in chapter 9. A self-regulating learner plans, monitors, evaluates, and replans (setting priorities, in that process). There is a list of specific self-regulating strategies you can use in the section on self-regulation in chapter 9.

Review

In this chapter, you considered a number of themes. The content of these themes can be summarized as follows:

- **Cognition**: the process of thought
- **Memory**: the storage of information
- **Language aptitude**: the ability to learn a foreign language
- **Metacognition**: thinking about thinking

Cognition

(1) Second language learning can differ from third language learning in that the more languages you study, the more schemata you have to assist your language-learning efforts.
(2) Knowledge is not necessarily fluency; one has to do with how much you know and the other with how quickly you can recall it.

Memory

(1) There are several kinds of memory and ways of classifying memory:
- Episodic, procedural, and semantic memory
- Attention/awareness
- Short-term, long-term, permanent, and working memory

(2) *Forgetting*
- Forgetting contributes to learning in the long run
- Memory can be overwritten.
- When memory of previously known information fails, it can be because long-term memory has been overwritten or because activated memory momentarily cannot retrieve the information.

(3) Memory can be assisted in several ways:
- Proper nutrition
- Proper rest
- Repetition
- Association

Aptitude

(1) Aptitude is not a single, monolithic construct.
(2) Some aptitude-related skills can be learned.
(3) It is possible to compensate for weak areas.

Metacognition

(1) Planning
(2) Setting Priorities
(3) Monitoring
(4) Evaluating

Practice what you have learned!

1.   You have a foreign-language test tomorrow, and unfortunately you have not kept up with your assignments. Which of the following steps might you take to improve your chances of a passing grade on the test? Exactly how will you do it? Explain why you decided to take a specific approach or not to take it. (Think about your own personal strengths and weaknesses, as you answer and explain where they matter and where they do not.)

     a. It's never too late – stay up late, cramming.
     b. Review what you do know and make sure that is solidly under your control.
     c. Learn as much of the new material as possible in time to get a good night's sleep.
     d. Get up early to study and review.
     e. Drink a strong cup of coffee before heading off to the exam.
     f. Eat a balanced breakfast, to include bagel and banana, before heading off to the exam.
     g. Assess whether you will be reviewing oral or written materials, so that you can play to your own strengths.

2.   Do you consider your language learning aptitude good, bad, or middling?

     a. On what grounds? (Experience? Comparison with others? etc.)
     b. Aptitude is a complex thing. Consider what you do well in language learning and what isn't so easy with you. List these in two columns.
     c. What do you do to cope with the items in the weaknesses column? What can you do that you are not doing now?

3.   Quickly assess your tolerance of ambiguity.

     a. What do you do when you hear or read a word you do not understand?
     b. How do you react when you come across a word that looks like one you already know but means something either a little or a lot different?
     c. What is your response to grammar that is completely different from what you are used to, such as number classifiers or politeness levels in Asian languages, or different kinds of passive voice in Indonesian or Philippine languages? (You might need to take a trip to the library and find a grammar book on a very different language to be able to answer this question; you might do this in combination with task 4 below.)

4.   Take a look at the language family chart in chapter 1. First, find a language related to the one you are studying and find out four or five things it has in common with your language. Then, select a language from another family and find out at least three ways in which it differs from your language.

If you want to learn more about the topics in this chapter, you might consult the following sources: Carroll and Sapon (1959); Ehrman (1998a); Golinkoff and Hirsh-Pasek, eds. (2000); Goodison (1987); Leaver (1999a); Leaver (1999b); Restak (2002); Restak (2003); Robinson, ed. (2002); Robinson (2002); Schachter (2002); Skehan (1998); Skehan (2002); Sternberg (2002); Sternberg (2003); Stevick (1996).