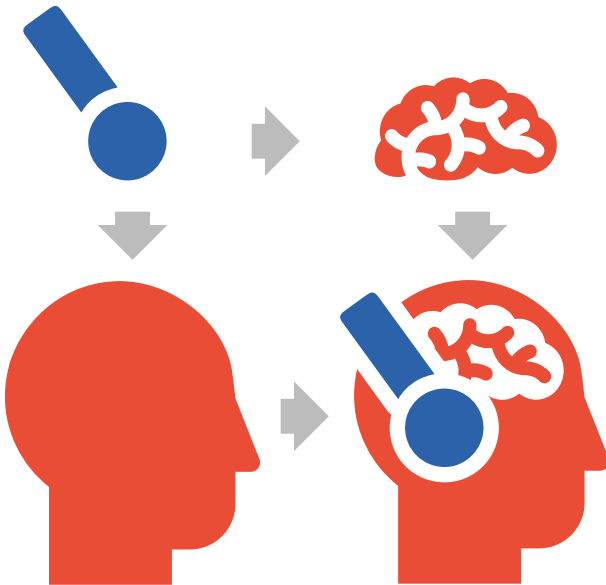Bernd Sebastian Kamps

Ear²Memory {3.0}

*To really learn languages
on your smartphone!*

STEINHAUSER
VERLAG

Executive Summary

The time needed to learn a foreign language is impressive: hundreds of hours to transfer 5000+ words into a human brain and then hundreds more hours to understand people speaking at '3+ words/second'. In addition, language learning seems to be immune to the accelerating and streamlining effects of modern technology – today, like 50 years ago, it takes over 1000 hours to start being fluent in another language.

No technology has been shown to be able to compress this time frame.

Here we present a method of double exposure to a new language through intense listening plus reading. The rationale for simultaneous ear/eye exposure is that incoming signals from the ear are processed in different brain areas than signals coming in from the eyes and both areas need to be trained simultaneously. Our free smartphone app *Ear^{2}Memory* (Google Play™: www.bsk1.com/e2m) is designed to assist the initial 50 to 100 hours of language learning. The only requirements are:

1. Time (at least 30 minutes every day)
2. Suitable language manuals including audio files (examples: page 45)

If you dedicate at least 30 minutes to daily *Ear^{2}Memory* exercises, you will rapidly learn more than 1000 words, have excellent spelling skills, develop an intuitive comprehension of important grammar rules and acquire a fairly genuine accent.

Ear²Memory Applications

The Ear²Memory app is free and has no ads (Google Play™: www.bsk1.com/e2m). You'll use it primarily to learn languages but you can use it with any audio file (speech or music) to boost your memory and improve your skills. Possible applications include the rehearsal of oral presentations (poems at school, shows at colleges, scientific demonstrations at conferences, etc.); dancing and tai-chi; and learning the vocal or instrumental part of a song. It has not escaped our notice that the specific mechanism of Ear²Memory immediately suggests a possible benefit in the rehabilitation of stroke patients with speech deficits (see www.OLIENA.com).

Ear²Memory Summary

Intense and simultaneous reading and listening ('ristening', see page 33) provides astonishing results in language learning, especially when repeating sentences several times in a row (5-10-15 times). Students quickly 1) distinguish sounds, 2) learn the meaning of words and sentences and 3) memorize the correct spelling.

Ear²Memory was designed to maximize ristening. All 'snippets' (short audio sequences representing a sentence or a few words) are automatically registered and can be replayed later at any time. Ear²Memory has a few features that make it outstanding:

- Automatic repeat (2-7 times)
- Invariable or smart pauses
- Speed control (50% to 150% of the original speed)
- Voice recorder
- Focusing on audio subsets
- Favorite snippets
- Snippet editing
- Snippet management: backup, restore, import, delete

Ear²Memory is an outstanding learning aid for all language students.

1. Folder button and BigButton

Ear^{2}Memory is a so-called **A-B Player** (Figure 0.1). To see how an A-B player works, **long-click** the folder button (top right) and enter Ear^{2}Memory's *Minimal Mode* (Figure 0.2):
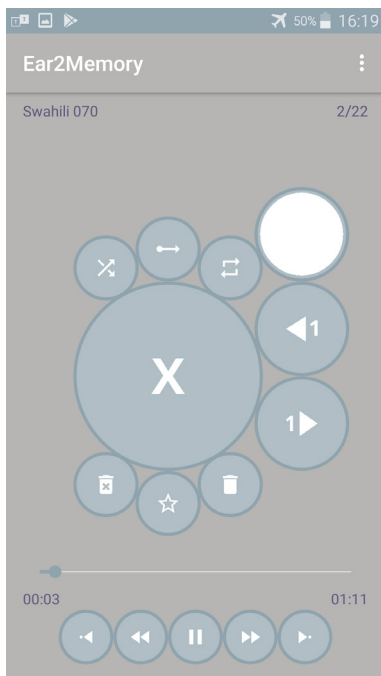
Figure 0.1 – Ear^{2}Memory's opening screen. Long-click the middle-sized folder button (top right) to enter Ear^{2}Memory's *Minimal Mode.*
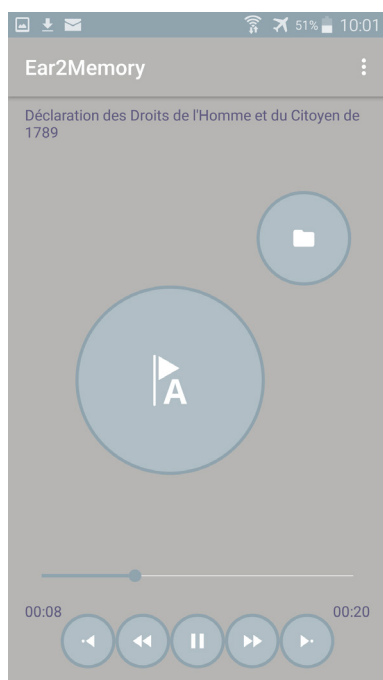
Figure 0.2 – Ear²Memory's *Minimal mode.*

First, (short-)click the Folder button and open an audio file. If you have no speech audio, click on 'AAA Ear²Memory' and select 'Déclaration des Droits de l'Homme et du Citoyen de 1789'.

Now

1. Click the central BigButton.
2. Wait a few seconds and click it again. Ear²Memory loops through the part of the audio you've just marked with the two clicks.
3. Click the BigButton again. The loop ends and the audio plays normally.

Continue using the BigButton until you are able to 'trap' sentences or groups of words and have them repeated. The procedure – a triple click – is so easy that all adolescents figure it out within minutes (see demo video www.bsk1.com/e2mvideo01). Unsurprisingly, adults 30 years and older may need hours.

When 'cutting' an audio file into snippets (those short audio sequences playing a sentence or a few words), read the text simultaneously – cutting is easier with the words and sentences in front of your eyes. Here are the first two articles of the Déclaration des Droits de l'Homme et du Citoyen, the *Declaration of the Rights of Man and of the Citizen* from 1789:

Article 1er (premier)

« Les hommes naissent et demeurent libres et égaux en droits. Les distinctions sociales ne peuvent être fondées que sur l'utilité commune. »

Men are born and remain free and equal in rights. Social distinctions can be founded only on the common good.

Article 2 (deux)

« Le but de toute association politique est la conservation des droits naturels et imprescriptibles de l'homme. Ces droits sont la liberté, la propriété, la sûreté, et la résistance à l'oppression. »

The goal of any political association is the conservation of the natural and imprescriptible rights of man. These rights are liberty, property, safety and resistance against oppression.

The following videos show how to

- cut an audio into snippets
  (www.bsk1.com/e2mvideo02)
- navigate between snippets
  (www.bsk1.com/e2mvideo03).

If you have no speech audios at hand, download a few audio files of the GigaSardinian project (page 38).

As soon as you are familiar with cutting audios into snippets, go back to Ear^{2}Memory's Standard mode. **Long-click** the Folder button again.

2. Overview

The buttons you'll use most often are (Figure 0.3): Folder (1), BigButton (2), Delete (3) and Right Arrow (4).

1. **Folder** – Select an audio file.

   Long-click the Folder button to enter Ear^{2}Memory's 'Minimal mode'; here snippets are NOT recorded. Long-click the Folder button again to return to the Standard mode.

2. **BigButton** – Set the start (A) and end points (B) for a snippet (a segment of an audio corresponding to a sentence or a group of words, usually just a few seconds long) that will be repeated in an endless loop. Click a third time (X) to exit the loop.

   Important note – All snippets are automatically recorded and will be available whenever you reopen the audio file. At this time, stop using the BigButton and use the arrow buttons (4 + 5) to browse through the recorded snippets.

3. **Delete** – Delete the snippet that is currently being repeated.

4. **Right Arrow (Next)** – Go to the next snippet.

5. **Left Arrow (Last)** – Go to the previous snippet.

6. **Repeat mode** – Enter the (autopilot) 'Repeat mode' for a single audio (page 75).

   Long-click to change the number of loops.

7. **Continuous mode** – At the end of an audio file, Ear^{2}Memory goes back to the beginning and starts playing the same audio again; this is Ear^{2}Memory's default mode. Activate the 'Continuous mode' if you want to play audio files one after another.

8. **Shuffle (random) mode** – Enter the 'Shuffle mode' to play the snippets of a single audio file in random order (page 92).

   Long-click to change the number of loops.

9. **Delete all** – Delete all snippets of the current audio file (page 71).

10. **Settings** – Snippet management (page 93), speed (68), pause (80).

11. **Star button** – Favorite button (page 99)
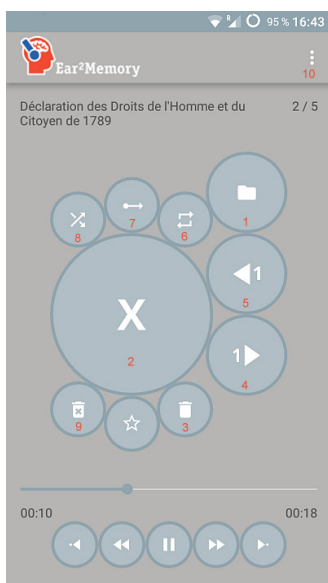
Figure 0.3 – Ear^{2}Memory buttons by order of first use
(www.bsk1.com/e2m).

For a detailed description of the Ear^{2}Memory functions, see page, 63 (Discovery) and 103 (Tricks) and 149 (All functions).

Bernd Sebastian Kamps

Ear^{2}Memory

*Really learning languages
on your smartphone!*

Version 3.0

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Preface to the 2018 Edition

Since the 2016 edition important things have happened. I personally continued my Ear^{2}Memory testing during

* 50 hours of Japanese (Langenscheidt)
* 450 hours of Chinese (Assimil)
* 100 hours of Swahili (Assimil)

More importantly, dozens of people, mostly adults, started studying English with Ear^{2}Memory, most of them for the first time in their life.

And finally, and most excitingly, young Félix from Paris started studying Chinese two months before his 13th birthday – alone, half an hour before school at 6:30 a.m. every morning! His worksheet: bsk1.com/ChineseFelix.

After two years of testing, we can now provide more precise recommendations on how to use Ear2Memory (Chapter *Strategy*, page 51) and present the impressive new components introduced by my brother Stephan in Ear2Memory 3.0 (see the details on page 63). You can now

* Record your voice and compare it with the original sound track
* Decrease or increse the audio speed
* Insert smart and fixed pauses
* Play subsets of audio files
* Mark and play favorite snippets
* Edit snippets
* Manage snippets: backup, restore, import, delete

Enjoy!

Bernd Sebastian Kamps – 30 September 2018

Welcome to Ear^{2}Memory! (2016)

Nine months ago, Marie de France asked me how I would use smartphone technology to boost memory in people learning new languages. I answered that the best memory booster is dedicated study – hours every day and mostly with books. I also reminded her that transferring 5000+ words into a human brain takes hundreds of hours; that to understand people speaking at '3+ words/second' is equally time-consuming; and that language learning is immune to the accelerating and streamlining effects of modern technology: Today, like 50 years ago, it takes more than 1000 hours to start being fluent in another language. No technology has shown itself able to compress this time frame.

Marie agreed that language learning is incompressible (like fluids) but she insisted on two points. First, 'Can't we motivate people better, young and old alike?' Second, 'Can't we help them to concentrate better and work more efficiently?' And, finally, 'Let's create a smartphone app for people who are willing to study a language several hours a day. Shouldn't we deliver the best conceivable service to people who are serious about working hard and determined to achieve quick results? And, of course, offer it for free?'

That was the decisive point: Create a product of excellence and make it free to the world! We accepted the challenge and went to work.

'We', well, first and foremost that was my brother Stephan who rolled up his 33-year-old programming sleeves (he started in 1983 with assembler/machine language) and plunged into Android Studio, weeks and months in a row, dawn to dusk. And it was a dozen courageous volunteers aged 9 to 80 who consented to test *Ear²Memory* in daily language learning.

Some results were totally unexpected (page 156).

* * *

Ear²Memory – Google Play™: www.bsk1.com/e2m – is a smartphone app specifically designed for accelerating language learning. If you know how powerful *Ear²Memory* is and are just looking for a detailed description of the app, please go directly to page 63.

If you are not aware of *Ear²Memory's* potential and want to see why it is so powerful, start on page 23, 'Island of total understanding' and discover that you have two different brain areas that process sound and vision, human speech and writing. You'll learn that some language manuals are more suitable than others for *Ear²Memory's* intense listening and reading (page 45) and that you can choose between different *Strategies* (page 51). After a few weeks, you will be ready for your first exams (page 117).

You can read all this in less than an hour. I sincerely wish you all the best with *Ear²Memory*!

Bernd Sebastian Kamps

11 November 2016

Content

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Bernd Sebastian Kamps

1. Objective: Island of Total Understanding

Have you ever studied a language in school, but never lived abroad? Then you know that 3 or 5 years of school lessons are not enough to understand foreign people in real life.

We now propose a new experience. If you follow our advice, you'll understand the first 60 minutes of audio of any language in 2 to 4 months. Most importantly, you'll understand them without reading the corresponding texts!

We'll help you conquer, perhaps for the first time in your life, a foreign 'island of total understanding'. Imagine being Hercules lifting a sunken mountain ridge out of the ocean: at first, only the highest peaks emerge from the waters – words; then, small islets will be connected by land bridges – sentences; finally, an entire island with a sumptuous landscape will appear. In a few months, you – Hercules – will understand every single word in a one-hour audio of any language of your choice.

You'll see later that comprehension of every word in a one-hour audio is the condition for becoming a 'volcano of speech'. For now, contemplate the extraordinary 'collateral benefits' of the 'total understanding' of one hour of speech in a foreign language:

1. You'll quickly learn more than 1000 words.
2. You'll develop intuitive knowledge of crucial aspects of grammar.
3. You'll boost your spelling skills.
4. You'll end up having a more genuine accent.
5. You'll be familiar with a concise method to learn even more languages in the future.

You don't need to be a neuroscientist to know that your ears and eyes are the only windows through which language enters you brain. All other senses are useless for language processing: you've never sniffed letters, you can't taste words and you won't caress sentences. But being a neuroscientist is helpful to understand that you need to **train both your ears and eyes** when you learn languages because what you hear is processed in a different brain region than what you see. If you put an emphasis on eye training and neglect the ears, you'll soon be able to read newspapers, novels and essays, but you won't understand people who talk to you. Alternatively, if you put an emphasis on ear training and neglect the eyes, you'll end up being illiterate. Both options are unacceptable. From the very beginning of your language training, train ears and eyes simultaneously.

In just a few weeks, you'll lay the foundation for a life-long skill that you can extend and improve at any time. Everything seems to be in place for a noble language career, but there is one major obstacle: Time!

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2. Method: Time

After reading The Word Brain, you may decide that you have no time to learn a new language – but never again will you say that you have no talent for it.

The Word Brain (TheWordBrain.com, free download)

If your parents had lived in a different country, today you'd speak a different language. Children don't care about languages, they learn with equal ease Mandarin, Spanish, English, Hindi, Portuguese, Bengali, Russian, Japanese, German, French, Italian, etc. Children have an outstanding skill for absorbing languages. In particular, they become true native speakers without a foreign accent – a feat almost impossible for anyone starting a language after age 6 or 7.

However, apart from accent-free speech, adults are immensely superior to young children. First, you have acquired the skill of high-speed reading which is a fast lane to language absorption. Second, your brain is home to a huge semantic web of tens of thousands of words, concepts and ideas. While young children still need to build their web, you have it! In a single year you can learn more language than a child during the first 6 years of its life.

The only true obstacle to language learning is **time**. If you don't have at least 30 minutes at least five days a week, postpone your language project because chances of frustration are greater than the chances of success. When you were a toddler, you listened to people talking, quarrelling and rejoicing every day, and no one would

have dared to lock you in a dark basement and cut you off from the world of words and language. Ever since you were born, you've heard your native language every day, and that's the very scheme you should adopt for your second, third or fourth language: daily exposure for months to come. Language must become your daily bread.

The target for Phase I is the perfect understanding of one hour of speech. This will take you around 100 hours. One hundred hours translates into 30 minutes every day for six months and 60 minutes for three months. It is a hefty investment; however, the complete understanding of one hour in a previously unknown language is an even heftier satisfaction.

Ear^{2}Memory – Google Play™: www.bsk1.com/e2m – proposes the following recipe:

1. Work your way through your language audio files one by one. (One hour of speech is usually divided into 20 to 50 audio files. If you have no language audio files, we'll show you where to get them on page 45.)

2. Cut every audio file into snippets of single sentences or groups of a few words (see page 4).

Bernd Sebastian Kamps

3. Read and listen to every snippet (5, 10 or even 15 or 20 times) until you

- Figure out which word corresponds to which sound;

- Understand the meaning of the words;

- Memorise the spelling of the words.

  If you listen to every snippet an average of 10 times, the playing time of a 1-minute audio is 10 minutes. These 10 minutes would be the **first chapter-session for that audio file**.

4. Over the following days, weeks and months, do another 10 (5 to 15) **additional chapter-sessions** for every audio file (see the Strategy chapter, page 51).

All in all, you'll hear and read all words and sentences around 100 times. Are you surprised by this figure? Don't be! In particular, don't believe false prophets. Language learning has never been fast and easy and never will be. In language learning, there are no miracles. Fast language learning as an adult is a result of robust intellectual power.

The reasons for not having time are multiple. You may prefer to

- Study philosophy, biology, history, archeology or whatever exciting topic humanity offers you;

- Dedicate your time to your family;

- Go jogging, biking, car-racing or sailing.

In other circumstances, strong thoughts occupy your mind (fear, despair, panic, etc.) and make it impossible for you to be alone with yourself 30, 60 or 90 minutes per day. All these are superb justifications to refrain from learning other languages. Just don't say that you have no talent for languages! Language learning is entirely and exclusively a matter of time. You've learned your mother language, and ergo you are entitled, even as an adult, to learn any language you can find on Planet Earth!

2.1 Differences in Study Time

Do factors like 'language aptitude' or 'language deficits' exist and favorite some language students while disabling others? Could you learn languages three times as fast as your fellow students or vice versa? Many people seem to be inclined to accept huge differences in language acquisition. The reality is probably more banal and no more impressive than the natural variation of *Homo sapiens* penis length when erect (see Figure 1.5 and the Wikipedia article 'Human penis size').
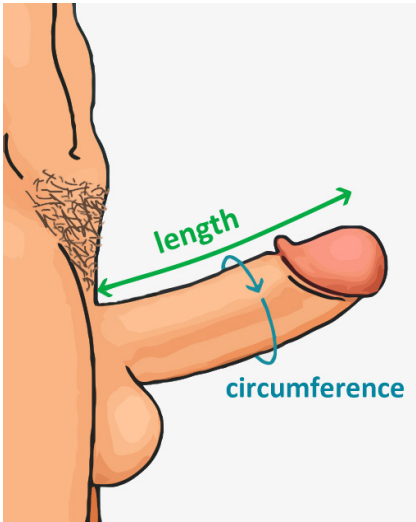
Figure 1.5 – How to measure? Scientific measurement of the erect penis. Mean length: 13.1 cm (5.16 in). Ninety percent of all penises were longer than 10.3 cm (4.06 in) und shorter than 15.7 cm (6.18 in). Veale D, Miles S, Bramley S, Muir G, Hodsoll J. *Am I normal? A systematic review and construction of nomograms for flaccid and erect penis length and circumference in up to 15,521 men.* BJU Int 2015; 115:978-86. Free full-text article: http://onlinelibrary.wiley.com/doi/10.1111/bju.13010/full. Accessed September 25, 2018.

See also:
Nick Evershed. *What is the average penis size? Find out with this interactive graphic.* The Guardian, March 5, 2015: https://www.theguardian.com/news/datablog/2015/mar/05/what-is-the-average-penis-size-find-out-with-this-interactive-graphic. Accessed September 25, 2018.

There is no doubt that the human brain is largely hardwired to accommodate languages. Babies nicely show that our brain is also hardwired to learn *any language*; moreover, they do it in comparable time periods. Until proven otherwise, we should therefore maintain the hypothesis that all humans have virtually equivalent linguistic basic skills that usually differ – as does penis length – by not more than ±20%. Does one student need 60 hours to understand a 45-minute Russian audio course word for word? If so, their less fortunate friends will have to study a little longer, some 70 hours, while the luckier ones will do it in about 50 hours. With that, everyone's happy!

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3. Results

Intense language learning with Ear2Memory (simultaneous reading and listening; see the definition on page 33) produces astonishing results:

1. To understand a language audio without reading the text, you have to know all the words. As one hour of audio contains between 1000 and 2000 unique words, Ear2Memory training is an excellent way to **quickly learn new words**.

2. Listening to short portions of an audio file about 100 or more times will end up giving you an intuitive knowledge of important aspects of grammar. You'll certainly need to study a more complete grammar later, but many rules you come across will then already be familiar. In any case, **grammar will be easier and more pleasant**.

3. Your **spelling will be excellent.**

4. As you have an entire life to speak your new language, there is no need to start speaking today. We recommend later that you listen to the audio files for a month or two and that you don't worry about speaking. By doing so, you'll give your brain time to absorb the correct pronunciation of single words and the characteristic sound of your new language. Just sit and wait, do a few months of intense listening and reading... and **you'll have a more genuine accent**.

5. Having experienced the power of Ear2Memory in your own skin (and in your brain) will be an incentive for

learning more languages! For all future language projects, you know what you can achieve and you know the time you need. You'll have acquired **a precious tool for future study**.

4. 'To risten'

The typical Ear²Memory exercise – lasting weeks and months – is the **simultaneous** and **repeated**

1. **listening** to audio snippets (single sentences or groups of words) while

2. **reading** the corresponding text.

The simultaneous stimulation of your memory via eyes and ears is the operating principle of Ear²Memory – and the basis for its success. (Remember: ears and eyes are the only windows through which language enters you brain. You'll never caress letters, you can't sniff words and you won't taste sentences.)

Throughout this manual we will repeatedly come back to this point: Listen + read! Read + Listen! Listen + read! In order to avoid lengthy explanations, we'll fuse the verbs 'read' and 'listen' into a single one. Among the possible options

- to readlisten (too bulky)

- to realisten (may be mistaken for *re-listen* or *realism*)

- to risten

only the third one, 'to risten', is both elegant and unequivocal. From now on, we'll refer to *simultaneous and repeated listening and reading* simply as **to risten** (German: *lören*; Spanish: *lescuchar*; French: *licouter*; Italian: *legoltare*; Sardinian: *ligutai*).

An example: 'Risten to your audios at least 30 minutes per day!' (See the video demonstration (www.bsk1.com/e2mvideo02.)

5. Ear²Memory Magic

To demonstrate how Ear²Memory works, we have developed a demo app called *GigaSardinian.*

5.1   Ear2Memory Demo: Loops

Install GigaSardinian from Google Play Store™: bsk1.com/gigasardinian. Upon lauching the app (Figure 5.1), the first sentence is immediately being repeated in an endless loop. This gives you time (remember Chapter 2, page 25) to

- Figure out which word corresponds to which sound;
- Understand the meaning of the words;
- Memorise the spelling of the words.

Click the button at the center to go to the next sentence or long-click it to return to the previous sentence. For a description of the four angular buttons which have both click and long-click functions, scroll down to the end of the GigaSardinian text.

GigaSardinian presents everything you need for a first language approach: **A**udio + **T**ranscription [= Text] + **T**ranslation + **W**ord lists. We'll call this an **ATTW package** (see also page 45). While listening to the GigaSardinian audio, check the word list on page 37 frequently.
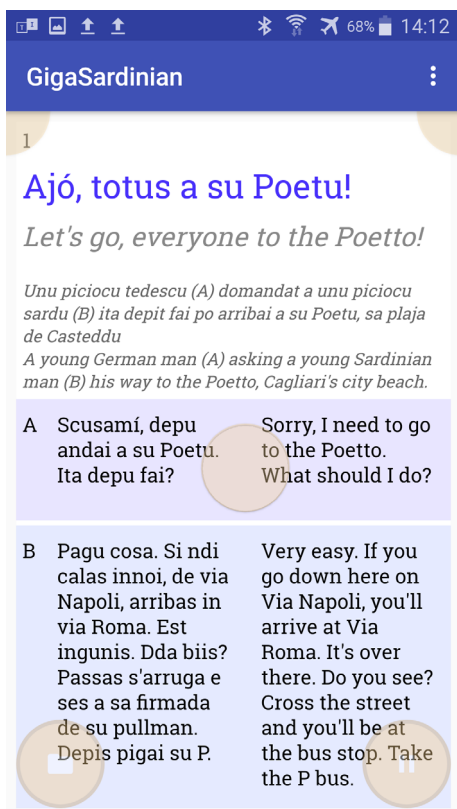
Figure 5.1 – *GigaSardinian*: The Ear[2]Memory demo app (Google Play Store™: www.bsk1.com/gigasardinian). On opening the app, you'll immediately hear the first snippet played in a loop. Click the button at the center to go to the next sentence, long-click it to return to the previous sentence. Scroll down to a description of the four angular buttons which have click and long-click functions.

Words

ajó	come on, let's go		innoi	here
totus	everybody		de	here: along
unu / una	a		est	it is
piciocu	boy, young man		ingunis	there
tedescu / tedesca	German		ddu / dda	it
domandat	(he/she) asks		biis	you see
domandai	to ask		passai	cross, pass
sardu	Sardinian		s'arruga (f.)	street
ita	what		e	and
depit	he must, he has to		ses	you are
depi	to have to		su / sa	the
fai	to do		sa firmada	(bus) stop
po	in order to; for		de	of
arribai	get to, arrive		su pullman	bus
a su Poetu	at the Poetto		depis	you must, have to
plaja	beach		pigai	to take
Casteddu	Cagliari		gratzias	thanks
scusamí	excuse me		gratzias meda	thanks a lot
depu	I must, I have to		a si biri	bye-bye
andai	go		potzu	I can
pagu cosa	very easy (litt: little thing)		domandai	to ask
si	if		cosa	thing
ndi	(to be explained later)		Ti potzu domandai una cosa?	May I ask you a question?
calai	to go down		certu	certainly

The next minutes will decide on your future Ear²Memory career. Can you imagine, hand on your heart, listening, reading and studying like that for at least 50 hours, maybe 100? It is probably one of the most efficient ways of learning another language. Over the past two years, while developing the app, I used Ear²Memory for studying Greek, Russian, Turkish, Japanese (about 60 hours each), Chinese (400+ hours; worksheet: bsk1.com/ChineseBSK) and Swahili (100 hours; bsk1.com/swahili). But as I said, life offers more enjoyable diversions and you may, rightly, prefer studying philosophy, biology, history, archaeology or dedicating your time to family, jogging or sailing. In this case, you can stop reading here.

5.2   Ear2Memory Test Run

Still here? Marvelous!

The next step is to find a suitable language manual with audio files, translations of the lessons and word lists. If you own such a manual, transfer the audio files to your phone or tablet, make yourself familiar with the BigButton (see page 4!) and cut the first audio file into snippets. Then follow the indications of the chapters Strategy (page 51), Lift-off (59), Discovery (63) and Tips and Tricks (103).

If you have no suitable language manual, find our recommendations on page 45. In the meantime, try and explore Ear²Memory with the PDF and audio files from the GigaSardinian project (www.GigaSardinian.com). During the demonstration, learn a few words of Sardinian, the language spoken on the island of Sardinia by roughly a

million people. (Where is Sardinia?
https://goo.gl/maps/fSn3jSmQia62)

The E^{2}M demonstration consists of four tasks:

A. Download a PDF and a few audio files.

B. Download and import a so-called 'snippet' file.

C. Play an audio file. Risten every snippet (sentence, half-sentence) 5, 10 or 15 times. (Recall the definition for 'risten' from page 33: *simultaneous and repeated listening and reading.)*

D. Open an Ear^{2}Memory worksheet, make a copy and document your study time.

A. Download

1. Download the free *GigaSardinian* PDF:
    www.bsk1.com/gspdf

2. Download seven free *GigaSardinian* audio files to your phone or tablet:
    - o   www.bsk1.com/gs001
    - o   www.bsk1.com/gs002
    - o   www.bsk1.com/gs003
    - o   www.bsk1.com/gs004
    - o   www.bsk1.com/gs005
    - o   www.bsk1.com/gs006
    - o   www.bsk1.com/gs007

B. Download and import a 'snippet' file

3. Download the GigaSardinian 'snippet' file to your phone or tablet: www.bsk1.com/gsSnippets (snippets tell Ear²Memory how to divide the GigaSardinian audios into short segments).

4. Import the snippets:

   o First, open the Ear2Memory menu (the three horizontal dots at the at the upper right hand corner).

   o Now select 'Snippets', then 'Import' and check *GigaSardinian001_007.e2m.*

   o Finally, click the small clock symbol at the upper right hand corner of the screen. A short confirmation message should appear at the bottom of the screen.

C. Play an audio file and risten every snippet (sentence, group of words) 5, 10 or 15 times

5. To play an audio file, click the folder button (top right of the middle-sized buttons) and select *GigaSardinian 001*.

6. Use the middle-sized Arrow buttons '1►' and '1◄' to browse the snippets (check this video: (http://www.bsk1.com/e2mvideo03)

7. Now open the PDF on a tablet or a computer and start browsing the snippets. If you are a beginner, don't speak (see page 105)! Just read and listen to each snippet until you

- clearly remember which sound corresponds to which word;
- memorize the meaning of the words;
- are familiar with the spelling of the words.

Check the word list in the PDF (the page following the text page) frequently. Don't hesitate to listen to the snippets 5, 10 or even 15 times. This is perfectly normal!

The text of GigaSardinian's first audio:

1. Ajó, totus a su Poetu!

Let's go, everyone to the Poetto!

Unu piciocu tedescu (A) domandat a unu piciocu sardu (B) ita depit fai po arribai a su Poetu, sa plaja de Casteddu.

A young German man (A) asking a young Sardinian man (B) his way to the Poetto, Cagliari's city beach.

A	Scusamí, depu andai a su Poetu. Ita depu fai?	Sorry, I need to go to the Poetto. What should I do?
B	Pagu cosa. Si ndi calas innoi, de via Napoli, arribas in via Roma. Est ingunis. Dda biis? Passas s'arruga e ses a sa firmada de su pullman. Depis pigai su P.	Very easy. If you go down here on Via Napoli, you'll arrive at Via Roma. It's over there. Do you see? Cross the street and you'll be at the bus stop. Take the P bus.
A	Gratzias meda. A si biri.	Many thanks. Bye.
B	A si biri. (...) Hm, scusamí, ti dda potzu domandai una cosa?	Bye-bye. (...) Hm, excuse me, may I ask you a question?
A	E certu!	Of course!
B	Tui no ses sardu, annó?	You're not Sardinian, are you?
A	No, seu tedescu. Poita?	No, I'm German. Why?
B	Poita fueddas in sardu. Babu sardu tenis, o mama?	Because you speak Sardinian. Do you have a Sardinian father or mother?
A	No, babu e mama funt tedescus tot'e is duus.	No, my father and my mother are both Germans.
B	Boh. E comenti fais a chistionai su sardu?	I don't understand. How can you speak Sardinian?
A	Eh...	Eh ...

Bernd Sebastian Kamps

If you listen to each snippet an average of 10 times, the playing time of a 1-minute audio is 10 minutes. Recall from Chapter 2 that these 10 minutes would be the *first chapter-session* for a given audio file. Over the following days, weeks and months, you'll need 10 (5 to 15) *additional chapter-sessions* for the same audio file to achieve a 100% understanding. All in all, you'll hear the words and sentences about 100 times.

To keep track of your effort, document the study time in a worksheet.

D. Open an Ear²Memory worksheet, make a copy and document your study time

After ristening the snippets of the first audio five, 10 or 15 times,

- Open the document www.bsk1.com/ws30,
- make a copy (File -> Make a copy) and
- write down the number of minutes you ristened every audio. (The figures shown in the worksheet are an idealized example.)

In the Strategy chapter (page 51), we have outlined different strategies for working your way through your audio files. But first, let's take a look at suitable language manuals.

6. Language Manuals

You know about your formidable inborn language acquisition capabilities; you will study at least 30 minutes per day; you know how Ear²Memory works and you anticipate how helpful it will be. But now, suddenly, a last roadblock may appear on your language avenue: finding a convenient manual. According to where you live and which language you want to learn, this may not be easy.

The complete package for training your ears and eyes includes ideally

1. Audio files
2. Texts (transcriptions of the audio files)
3. Translations of the texts
4. Word lists

We called this an **ATTW package** (**A**udio + **T**ranscription [= Text] + **T**ranslation + **W**ord lists). GigaSardinian is such a package (see the Ear²Memory Test Run, page 38). Unfortunately, many language manuals have no audio files at all – in today's world with audio players on billions of smartphones, that's obscene. Don't buy them ever! Of those manuals that *do* come with audio files, most don't include the translations of the texts. Although these manuals can be used for Ear²Memory ristening, you'll lose precious time figuring out the meaning of the texts.

Fortunately, there is a positive list, although shorter. Almost all of the following manuals and series offer at least **ATT** (**A**udio + **T**ranscription [= Text] + **T**ranslation):

6.1   English native speakers

- **Assimil** series: Chinese, Korean, French, German, Italian, Japanese, Portuguese, Russian, Spanish, and many more.

  Unfortunately, the chapters don't include lists of newly presented words, grammar is short and some texts seem to be decades old. However, the audio files are generally excellent!

  Link: www.Assimil.com

- **Living Language | Complete edition** series: Chinese (Mandarin), French, German, Italian, Japanese, Portuguese (Brazilian), Spanish and many more.

  Link: www.livinglanguage.com

6.2   German native speakers

- **Langenscheidt-Sprachreihe 'mit System'** – Englisch, Spanisch, Französisch, Italienisch, Portugiesisch, Niederländisch, Russisch, Griechisch, Norwegisch, Schwedisch, Dänisch, Tschechisch, Polnisch, Türkisch, Chinesisch, Latein, Arabisch.

  Diese Sprachreihe bietet Audiodateien mit normaler und langsamer Sprechgeschwindigkeit. Ein Beispiel für Text, Übersetzung, Wortliste und Glossar finden Sie auf Seite 161.

> Die Bände der 'mit System'-Sprachreihe gehören zu den besten Sprachlehrbüchern der Welt!
>
> Link: www.langenscheidt.com

- **Assimil-Sprachreihe**: Chinesisch, Englisch, Französisch, Italienisch, Japanisch, Portugiesisch, Russisch, Spanisch und einige weitere Sprachen.

  Link: www.assimilwelt.com

- **Langenscheidt-Sprachreihe 'In 30 Tagen'** – Englisch, Spanisch, Französisch, Italienisch, Niederländisch, Schwedisch, Japanisch, Türkisch, Russisch.

  Link: www.langenscheidt.com

6.3   French native speakers

- **Assimil** – La methode intuitive, entre autre Chinois, Coréen, Français, Allemand, Italien, Japonais, Portugais, Russe, Espagnol, Suaheli.

- Les chapitres n'incluent pas de listes de nouveaux mots, la grammaire est brève et certains textes pourraient dater de plusieurs décennies. Cependant, les fichiers audio sont dans l'ensemble EXCELLENTS!

  Lien: fr.assimil.com

- Pocket: Langues pour tous, 40 leçons pour parler... – allemand, anglais, espagnol, italien, portugais, le grec moderne.

- Pocket: Se perfectionner en anglais, espagnol, allemand, italien.

- Pocket: ... au quotidien: anglais, americain, espanol. Excellent audios ! Ces enregistrements sont parmi les meilleurs du monde !

6.4 Italian native speakers

- **Assimil** – Collana senza sforzo

  Cinese, Francese, Giapponese, Inglese, Portoghese, Russo, Spagnolo, Tedesco e altre lingue.

  www.assimil.it

6.5 Spanish native speakers

- **Assimil** – El método intuitivo

  Alemán, Francés, Inglés, Italiano, Portugués de Brasil, Ruso, Árabe, Catalán.

  fr.assimil.com

6.6 Portuguese native speakers

- **Assimil** – O método intuitivo

  Alemão, Espanhol, Francês, Italiano.

  fr.assimil.com

After finding a manual that is suitable for Ear²Memory training, transfer the audio files to your smartphone or tablet via USB, Bluetooth or email.

All you need now is a robust study strategy.

No suitable manual

If you don't find a suitable manual, there is only one solution: Do it yourself! For any given language you'll find on the internet audio material *en masse*. Proceed as follows:

1. Select a total of 45 to 60 minute of speech audios of your choice and prepare MP3 files of 1 to 2 minutes.

2. Ask native speakers to make a transcription of the audios. Recommend them to use the *Ear²Memory* app for their transcription task.

3. Translate the transcription at https://translate.google.com and have the Google translation revised by a person who is fluent in both languages.

4. Put your new **ATTW** or **ATT package** on the internet for free access to everybody.

5. Notify Ear²Memory for inclusion of your package on our website.

In an ideal world, we would soon have hundreds of free language packages on the internet... ☺

7. Strategy

Never believe anyone telling you that learning a new language is anything like acquiring your native language! Ask yourself when and how you discovered your mother tongue:

1. During your first years of life while developing your listening abilities and slowly starting to speak: first one, two or a few words and, much later, well-structured sentences.

2. During your first school years when you started reading and writing – again, slowly progressing year after year.

3. And finally, throughout your entire education career, extending your vocabulary, year after year, to tens of thousands of words.

Do you have five, 10 or 15 years to repeat this feat in another language? Of course not! As a matter of fact, you should accomplish it in two to three years. Second (or third or fourth or fifth) language acquisition is therefore always an exercise of time compression.

In order to compress time more efficiently,

1. Define your daily sustainable workload

2. Establish a lean study scheme

7.1   Daily Sustainable Workload

Sustainability is the cornerstone of language conquest. Determine which daily rhythm you can sustain over weeks and months. Thirty minutes per day are the strict minimum, but 45, 60 or 90 minutes per day are better. If you are a language student, aim at two to three hours.

In my experience, 60 minutes is easy, 120 minutes requires a certain discipline, and 180 minutes or more is possible only if no other important activities are happening around you. Ristening (definition on page 33) can be exhausting – just 30 minutes is a demanding exercise. Three hours per day implies six 30-minute sessions or nine 20-minute sessions. Give it a try and discover how day-filling it is!

7.2   Lean Study Scheme

In order to achieve total and intuitive understanding (page 23), you will have to repeat every chapter roughly a dozen times. If your language manual has 100 chapters, the number of 'chapter-sessions' will exceed 1,000 (see https://goo.gl/jUuzR6 where an 'x' corresponds to a chapter-session). It is highly recommended to organize these sessions in a worksheet.

Over the past two years, we have been testing Ear[2]Memory with various languages (mostly English) and with people of different ages (mostly adults). Table 7.1 presents links to worksheets of 6 students.

Table 7.1 – **Ear[2]Memory Worksheets** of six students (aged 13 to 64 years) studying Chinese, English and Swahili.

Age (Student)	Language	Manual	Study Hours	Worksheet
13	Chinese	Assimil	100	Link
63	Chinese	Assimil	459	Link
15	English	Assimil	50	Link
40	English	Assimil	130	Link
60	English	Assimil	140	Link
64	Swahili	Assimil	100	Link

We now recommend the strategy devised for the Swahili test (bsk1.com/swahili) which consists in ristening a few audio files, for example 7, then starting again with chapter 1, pushing the limits further, restart at chapter 1, etc. For a typical 100-chapter manual of the Assimil series (fr.assimil.com) you would

1. start with a quick overview of the first 7 lessons,
2. go back to lesson 1 and continue until lesson 14
3. go back to lesson 1 and continue until lesson 21 (we also recommend that you study new chapters twice in a row; here: 15, 16, 17, 18, 19, 20, 21, 15, 16, 17, 18, 19, 20, 21),
4. continue with lesson 1-28,
5. lesson 1-35,
6. 1-42,
7. 1-49,
   etc.

This procedure has three advantages: first, you'll feel **sensible progress** every time you repeat the lessons;

second, at the end of each round, you will be eager to **push the limits further** and open new horizons; third, you will soon (within 4-6 weeks) be able to start repeating the first lessons aloud and discover that you have a **fairly genuine pronunciation**.

The fine-tuning of this strategy depends on your time and personal preferences. The basic variables are three:

1. **Daily study time.** Do you want to reduce the 90 minutes in the Swahili example to 45 or 30 minutes?

2. **Number of new lessons after each round.** Do you want to add 7 new lessons after each round or just three or four?

3. **Dividing a manual into blocks.** Do you want to discover all 100 lessons round after round? Or would you prefer to divide the manual into blocks – for example, two (lesson 1-50 + 51-100) or three blocks (1-33, 34-66, 67-100) – and 'wrap up' one block after another?

It is up to you to decide on these points. Favor strategies which guarantee that you study every chapter at least 10 times. Three examples:

- 30 minutes/day + three new audios per round
  Spreadsheet: https://goo.gl/SeSVH7
- 45 minutes/day + four new audios per round
  Spreadsheet: https://goo.gl/Wk7PvL
- 90 minutes/day + 7 new audios per round
  Spreadsheet: https://goo.gl/fmM9Qk

Open the spreadsheet that suits you best and make a copy (*File -> Make a copy*). The first page (your future worksheet) shows a proposal where we allocated 7 minutes to each chapter for the first session, 5 minutes for the second one and 4 minutes for all subsequent sessions. In real life the 'minutes per chapter' vary widely, as you can see from the Swahili experience: www.bsk1.com/swahili.

In the following spreadsheets explore the tabs which demonstrate different progression schemes.
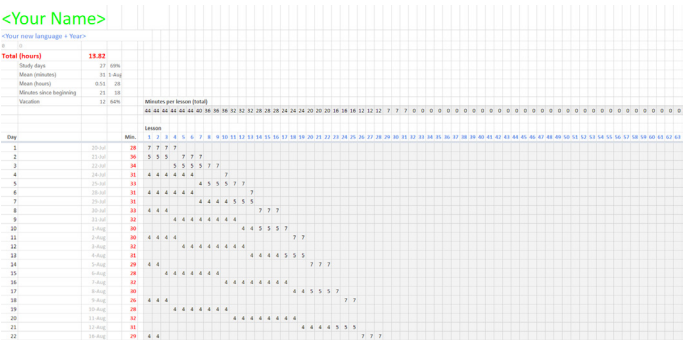
Figure 7.1 – **Spreadsheet 30+3.** Thirty minutes per day, three new audios after each round: www.bsk1.com/ws30. Check also the tabs (bottom left):

- '3 blocks / 3 new lessons per round'
- '3 blocks / 4 new lessons per round'
- '2 blocks / 5 new lessons per round'
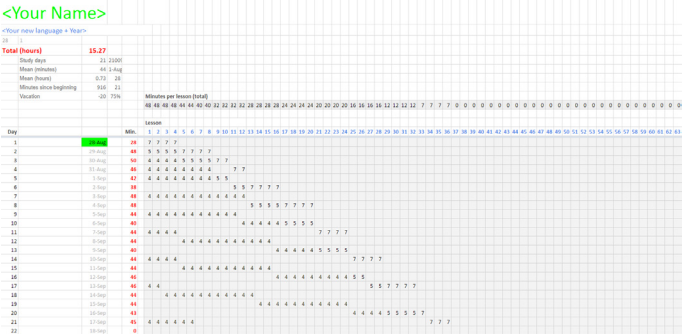
Figure 7.2 – **Spreadsheet 45+4.** Fourty-five minutes per day, four new audios after each round: www.bsk1.com/ws45. Check also the tab (bottom left):

- '2 blocks / 4 new lessons per round'

Figure 7.3 – **Spreadsheet 90+7.** Ninety minutes per day, seven new audios after each round: www.bsk1.com/ws90. Check also the tabs (bottom left):

- '1 block / 7 new lessons per round'
- '2 blocks / 7 new lessons per round'
- '3 blocks / 5 new lessons per round'

To see how a general scheme translates into real life data, compare these links:

1. Scheme for 100 chapters and 1400 chapter-sessions: https://goo.gl/fmM9Qk
2. Real life example: www.bsk1.com/swahili

Your language project is now on track. Do you feel comfortable using Ear²Memory's BigButton and and are you able to cut an audio file into pieces (page 4)? If you are 20 years old or younger, mastering the cutting process will take you a minute; at 60 years or older it may take weeks. There *is* a difference between digital natives and digital latecomers…

8. Lift-Off

You are ready for lift-off! You have

- Time
- Ear²Memory
- Audio files from a suitable language manual
- A strategy and a worksheet

And you know how to

- cut audio files into snippets
- browse recorded snippets with the arrow buttons '1►' and '1◄'

Your final target:

> **Understanding every single word** of an audio and guess the correct spelling **without reading the text, with eyes closed**.

The buttons you'll use most often are the Folder (1), the BigButton (2), the Delete (3), the Right Arrow button (4) and the Left Arrow button (5).

1. **Folder** – Select an audio file.
2. **BigButton** – Set the start (A) and end points (B) for a *snippet* (a segment of an audio corresponding to a sentence or a group of words, generally just a few seconds long) to be repeated in an endless loop. Click a third time (X) to exit the loop.

   Important! All snippets are automatically recorded and will be available whenever you

> reopen the audio file. After the first 'recording'
> session of an audio file, stop using the BigButton
> and use only the arrow buttons (4 + 5) to browse
> through the recorded snippets.

3. **Delete** – Delete the snippet that is currently being repeated.

4. **Right Arrow (Next)** – Go to the next snippet.

5. **Left Arrow (Last)** – Go to the previous snippet.
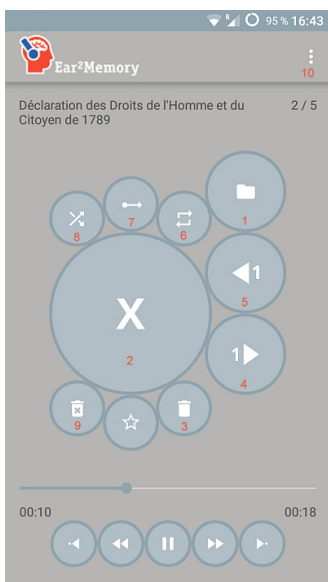
Figure 8.1 – Ear^{2}Memory buttons by order of first use. For a start, you'll use primarily buttons 1-5.

Your daily routine:

1. Open an audio and listen to the entire audio once or twice while reading the translation. This way, you'll get familiar with the content of the text.

   If you have learned the language before, listen once or twice to the entire audio file while reading the transcription. That will give you a feeling of what you know and what you still have to learn.

2. If you haven't prepared the snippets for this chapter, do it now.

3. Listen to every snippet as long as it takes you (5, 10 or even 15 or 20 times) and

   • figure out which word corresponds to which sound;

   • learn the meanings of the words;

   • memorise the spelling of the words.

4. At the end of the audio, document your study time (minutes) in your worksheet.

5. Go the next audio according to the program outlined in your worksheet.

May I give you a final bit of advice? Listen to the audio files of your manual for a month or two, but don't speak (see page 105 and 117). Give your brain time to absorb the correct pronunciation of the words and the characteristic sound of the language. If you postpone speaking, you'll have a more genuine accent. For free!

In Chapter 9, discover new Ear²Memory functions week after week. In Week 1 discover a dark screen, the all-important XXL mode and the elegant 'Long-click Delete'.

Important

Remember that you need to 'cut' an audio into snippets only once because all snippets are automatically recorded. Thereafter, stop using the BigButton; instead, use only the middle-sized arrow buttons '1▶' and '1◀' to browse between snippets.

If you want to do BigButton exercises *without* saving the snippets, enter Ear²Memory's Minimal mode by long-clicking the folder button (see page 4).

9. Ear^{2}Memory Discovery

Ear^{2}Memory is a powerful and easily controllable app (see the 'Triple-Click' BigButton performance, page 4). During the coming weeks of daily study you'll discover the app step by step. Let's start with what you should know in Week 1:

1. Dark screen

2. XXL mode

3. 'Long-click Delete'

9.1 Week 1

9.1.1 Dark screen

Ear^{2}Memory has a dark screen you'll use in bright conditions (beach, sunny garden) and during the night (thus avoiding waking up your partner; Figure 9.1). To switch between screen modes, long-click the Continuous button (center top).
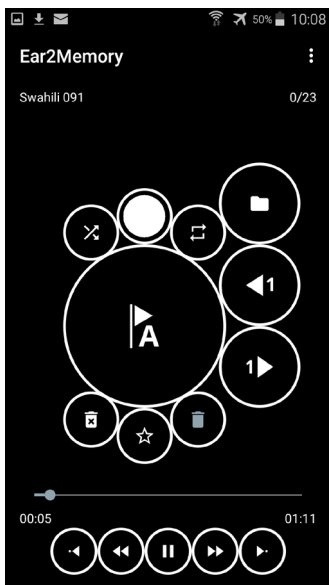
Figure 9.1 – Ear^{2}Memory's night and beach mode. **Long-click** the Continuous button (center top) to switch between screen modes.

9.1.2   XXL Mode

The XXL mode is one of the most useful Ear^{2}Memory features. After **long-clicking** the BigButton, here's what you see:
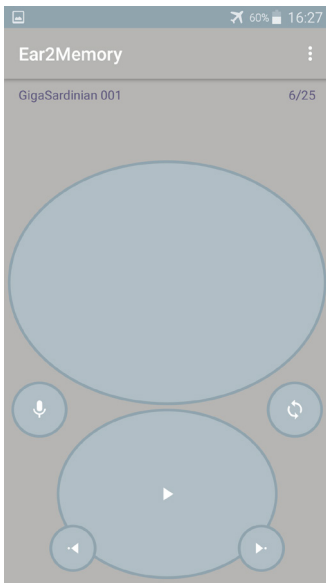
Figure 9.2 –Ear^{2}Memory's XXL mode.
Long-click the Play/Pause button to return to the Standard mode.

Why would we want to present you such an enormous button? We would because the XXL button allows you to navigate through the snippets without taking your eyes away from your text. Click: next snippet, long-click: last snippet.

The XXL mode has all the buttons you need for your daily routine (once your snippets are recorded):

- Play/Pause
- Next file and and last file
- Activate/Deactivate smart pause
- Microphone

Opposite the Microphone button you'll see the 'Smart Pause' button. When activated (orange), Ear^{2}Memory inserts between repeats a pause that is as long as the currently played snippet. As for the powerful microphone that will record and replay your voice, learn how to use it in Week 5. Wait at least a month before speaking aloud (see page 105 and 117).

To return to Ear^{2}Memory's Standard screen, **long-click** the Play/Pause button.

9.1.3   Long-click Delete

By (short-)clicking the Delete button (Figure 9.3) you eliminate imperfect snippets, either too short or too long.

The Delete button has also a comfortable **long-click** function. It deletes the currently played snippet and tells Ear^{2}Memory to resume playback **three seconds before the beginning** of that deleted snippet. Be ready to click the BigButton within seconds and start registering the snippet again. What sounds convoluted is, as you'll soon find out, an immensely useful function!
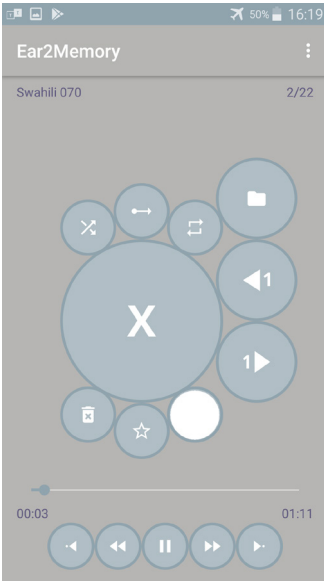
Figure 9.3 –The Delete button.
Click: delete the currently played snippet.
Long-click: delete the currently played snippet and tell
Ear^{2}Memory to resume playback **three seconds before the
beginning** of the deleted snippet.

9.1.4   Advice

The first study week is crucial. Don't skip a single day because you must reorganize your daily routine (see page 103). Get into the habit of studying

- As early as possible, for example, in the morning, before going to school, work or university.

- Several times a day. Twenty minutes twice a day (bid) is better than 40 minutes once a day (qd). The more often you expose your brain to a new language, the better.

9.2   Week 2

Have you studied every day for at least one week? Do you know how to cut audio files into pieces with the BigButton? Did you appreciate the Long-click Delete acrobatics?

Then explore the following functions that will make Ear^{2}Memory life even smoother.

9.2.1   Playback speed

If the Android version of your phone or tablet is 6.0 or higher, Ear^{2}Memory gives you control over the playback speed of your audio files. **Long-click** the Forward button (Figure 9.4) and open the speed menu. The default value is 1 (Figure 9.5). Reduce the speed to 0.5 or accelerate up to 1.5.
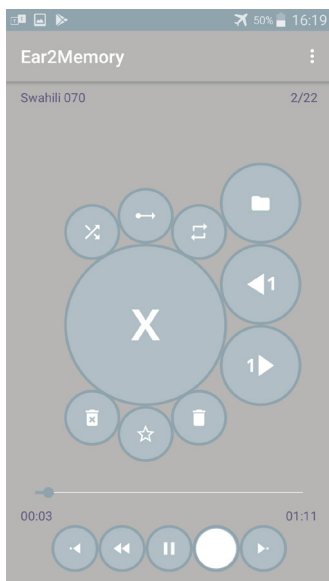
Figure 9.4 – Speed control. **Long-click** the Forward button to open the speed control menu (Figure 9.5).
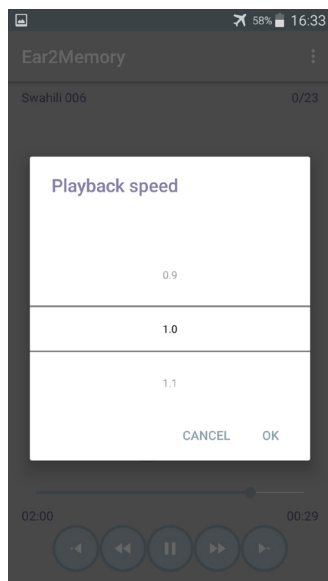
Figure 9.5 – Speed control. Reduce (0.5-0.9) or increase (1.1-1.5) the audio speed. Normal speed is 1.0.

9.2.2 Backup snippets

Preparing thousands of snippets for dozens of audios takes weeks. Don't take chances and save them at regular intervals: **long-click** the small Play/Pause button (center bottom, Figure 9.6). The backup screen opens (see example in Figure 9.7). The album you are listening to is preselected. To save your snippets, click the diskette symbol at the top right corner.

The snippet file has the extension *.e2m and is stored in
the /Ear2Memory directory of your phone or tablet. The
file name includes the name of the album and the day and
time of the backup.
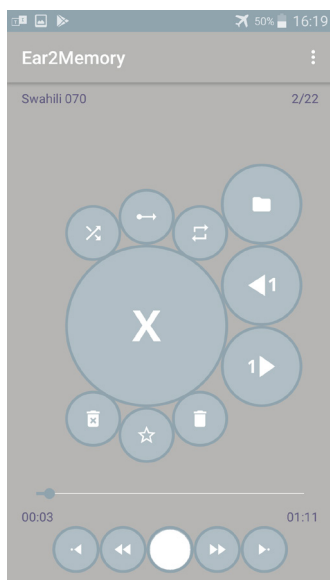
Figure 9.6 – Backup
snippets. **Long-click** the
Play/Pause button to open
the backup menu (Figure
9.7).
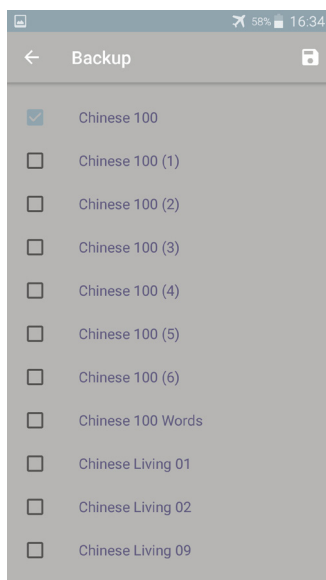
Figure 9.7 – Backup screen.
The album you are listening
to is preselected. To save
your snippets, click the
diskette symbol in the top
right corner of the screen.
The snippet file with the
extension *.e2m is stored in
the /Ear2Memory directory of
your device.

9.2.3 Delete all snippets

Very rarely you may want to delete all snippets of a single audio file and start cutting the snippets anew. Click the 'Delete all' button and confirm. (Figure 9.8 and 9.9).
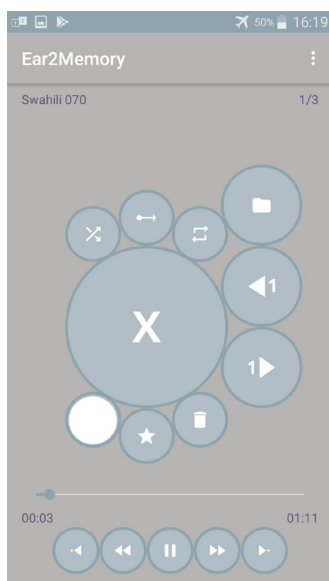
Figure 9.8 – Click the 'Delete all' button to delete all snippets of the current audio file (Figure 9.7).
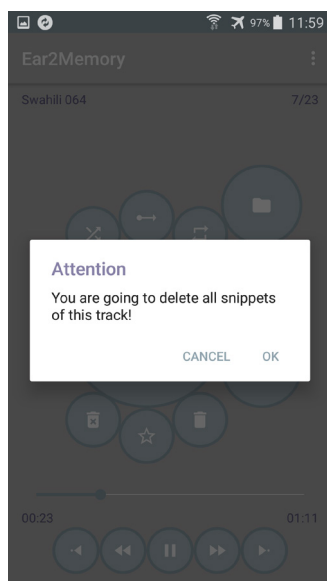
Figure 9.9 – Confirm deleting all snippets of the current audio file.

9.2.4 Edit snippets

Now comes the fun part of Week 2. Long-click the 'Delete all' button (don't worry: you won't delete anything...) and see how the five small buttons at the bottom of the screen rearrange:
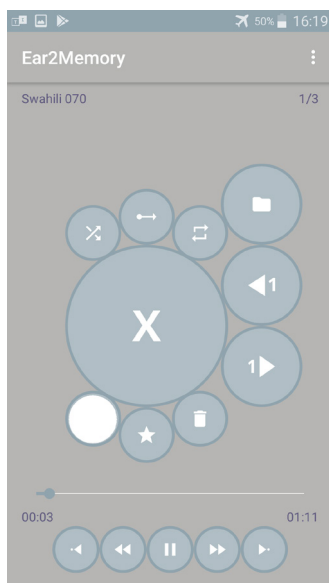
Figure 9.10 – **Long-click** the 'Delete all' button to enter the Edit mode. The five small buttons at the bottom of the screen rearrange (Figure 9.11).
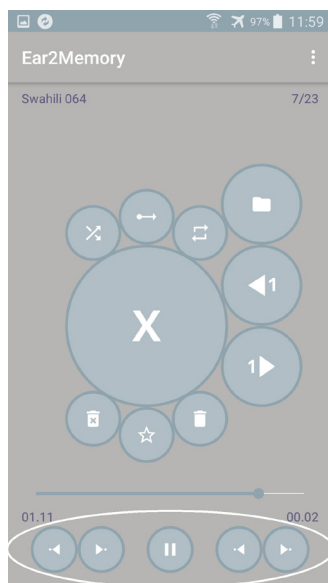
Figure 9.11 – Edit mode. The two buttons on the left move the start point of the snippet back and forth (0.1 seconds/click). The buttons on the right move the snippet end point. **Long-click** the central *Play/Pause* button to save changes.

Clicking the two buttons on the left side several times, you'll note that you move the starting point of the snippet back and forth; in fact, each click does so by 0.1 seconds. The same goes for the two buttons on the right which shift the snippet end point. Once you've adjusted your snippet, you must **long-click the Play/Pause button** to save it.

The Edit function is useful for cutting longer chunks of speech with practically no moments of silence in it. Here, the 0.1-second click will come in handy.

However, with short sentences limited by distinct bits of silences, simply deleting and recording a snippet again is faster.

To return to Ear^{2}Memory's Standard screen, long-click the 'Delete all' button again.

9.3   Week 3

After 14 days of continuous learning, you are ready for the first modification of your Ear²Memory routine. Select 7 audio files and explore how to play automatically all snippets in a loop, repeating each snippet two, three or more times.

9.3.1   Selecting audios

First, select a limited number of audio files. Click the folder button and open the audio menu. Files with existing snippets are shown in orange (Figure 9.12).

You can select the audios in two ways:

1. Check or uncheck the checkboxes of *single audios*: click the checkboxes.
2. Check (Figure 9.13) or uncheck *all audios*: **long-click** any audio file name.

Check the checkboxes of the first 7 audios and (single-)click the name of the first one. You can now use the 'Next file' and 'Last file' buttons to navigate through these audios.
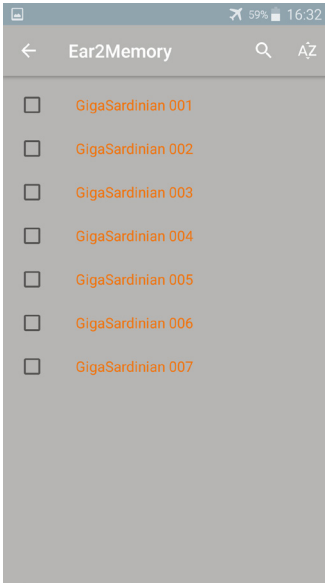
Figure 9.12 – Selecting an audio file. Audios with snippets are shown in orange. Click a file name to play an audio.

Long-click any file name to check or uncheck *all* files (see Figure 9.13). Note that only checked files can be navigated with the 'Next audio' and 'Last audio' buttons.
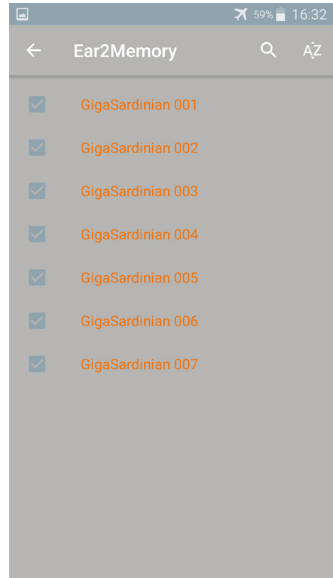
Figure 9.13 – Seven files checked. Selected audios can be navigated with the 'Next audio' and 'Last audio' buttons.

Click a file name to play an audio

Long-click any file name to uncheck all files (see Figure 9.12).

You are ready for multitasking learning.

9.3.2   Repeat button: Multitasking learning

Ear^{2}Memory's 'Full Power' mode –ristening– will always be your primary mode of learning. Being hyper-focused, you'll learn faster.

There is an auxiliary mode, though: the *Multitasking* mode. Are you performing a complicated culinary recipe or doing a bit of handiwork around the house? Or does your life enter idle, siesta or beach mode? In all these cases, put on your headphones and listen to your language files! The most suitable audios are those you have already listened to at least three or four times.

Typical situations for multitasking listening include transportation and non-intellectual activities:

- Transportation
    - o   in your car (use your car speakers)
    - o   on public transport
- Non-intellectual activity
    - o   shopping
    - o   jogging
    - o   cooking
    - o   beach time
    - o   in the bathtub
    - o   during a siesta
    - o   before you fall asleep

Ear^{2}Memory has two powerful features for multitasking learning: The *Repeat mode* and the *Continuous Repeat mode*. If you click the right button sitting on top the BigButton, Ear^{2}Memory starts repeating every snippet three times (Figure 9.14).
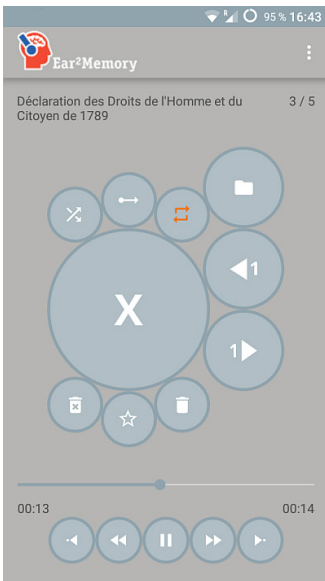
Figure 9.14 – Ear^{2}Memory's repeat mode. All snippets are being repeated automatically. **Long-click** the repeat button to define the number of times every snippet will be played (see below, Figure 9.16).
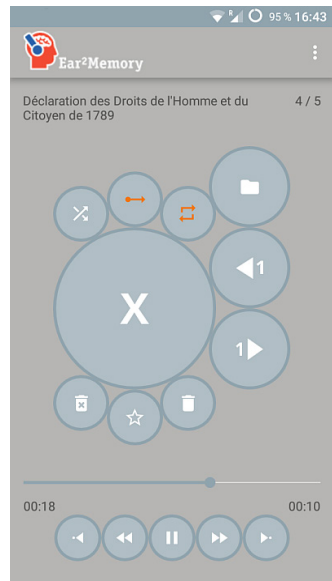
Figure 9.15 – *Continuous* repeat mode. At the end of an audio, Ear^{2}Memory plays the next audio file.

At the end of the track, *Ear^{2}Memory* jumps back to the beginning and plays the same audio again; this is Ear^{2}Memory's default mode.

If, instead, you want to have Ear^{2}Memory play, one after another, the seven audio files you've selected (Figure 9.13), choose the *Continuous Repeat mode* by activating the middle button atop the BigButton (Figure 9.15). Now, Ear^{2}Memory plays the audios of your list. I use the continuous repeat mode primarily during grocery shopping, cooking, siesta and pre-sleep time.

As default, Ear^{2}Memory plays each snippet three times. To change the number of repeats, **long-click** the Repeat button (Figure 9.14) and select a value from 1 to 7 (Figure 9.16).

We'll later demonstrate how to use the repeat functions for a second wave of intense rehearsal (page 108). For now recognize that the Repeat mode is supremely suited for boosting chapters you have studied within the last 24 hours. Select the corresponding audio files, activate the Continuous Repeat mode – and by the time you commute to work, you will have heard every snippet dozens of times.
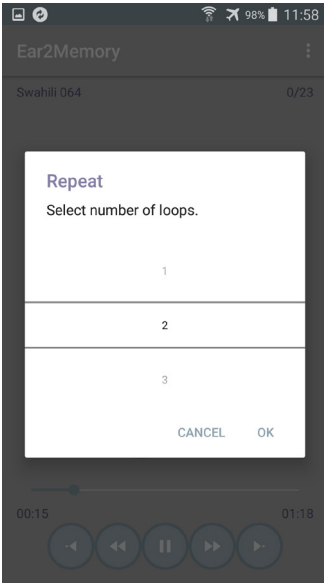
Figure 9.16 – Select the number of times snippets are played.

9.3.3   Insert pauses between repeats

Normally, Ear^{2}Memory repeats snippets without interruption. This is perfect during your first chapter-sessions: the more speech you present to your brain, the faster your neurons will be rewired.

Later, after studying a chapter a few times, it can be convenient to make Ear^{2}Memory 'shut up' for a few seconds. During the pause, quickly repeat the snippet, first silently inside your brain, later aloud. (Remember: We advised you not to talk for a few weeks and just listen to the audios. See page 105 and 117.)

Ear^{2}Memory has two different types of pauses: invariable ones and smart ones. Invariable pauses always have the same value, for example, 0.5, 1, 1.5, 2, or 2.5 seconds. To activate them, **long-click** the 'Next Audio' button (Figure 9.17) and select the length of the pause (500, 1000, 1500 milliseconds etc.; Figure 9.18).
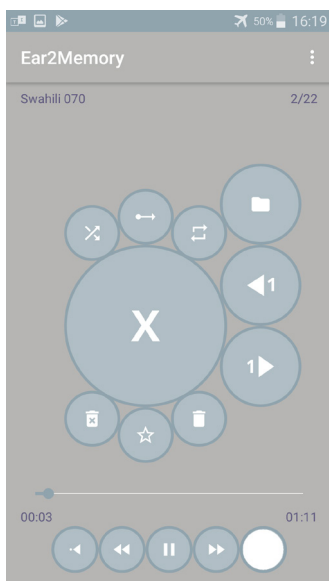
Figure 9.17 – Insert an invariable pause between snippet repeats**. Long-click** the 'Next Audio' button and select the length of the pause (in milliseconds; Figure 9.18).
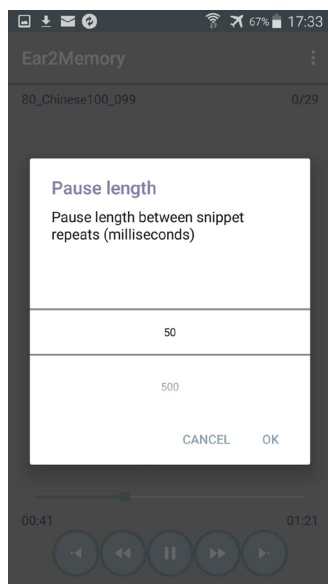
Figure 9.18 – Define the pause length between snippet repeats.

Smart pauses, on the contrary, insert pauses of variable length – the longer the snippet, the longer the pause. You can activate them in two ways:

1. From within the XXL mode, click the 'Smart Pause' button (Figure 9.19). It turns orange. Click again to deactivate the smart pauses.
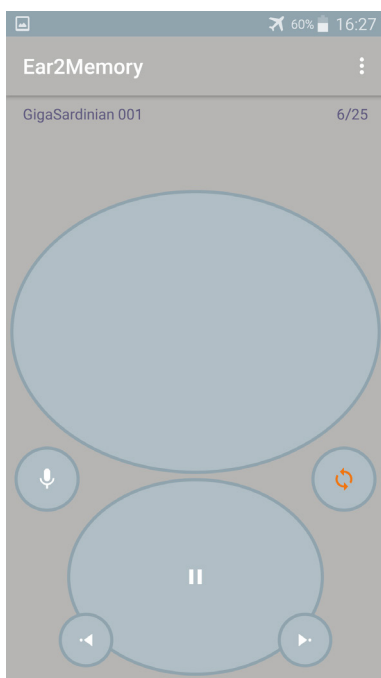
Figure 9.19 – Smart Pause. Activating the button on the right (the symbol turns orange) inserts a pause that has roughly the same length as the snippet.

2. From within the Standard mode, **long-click** the 'Previous Audio' button to activate smart pauses (Figures 9.20, 9.21, 9.22).
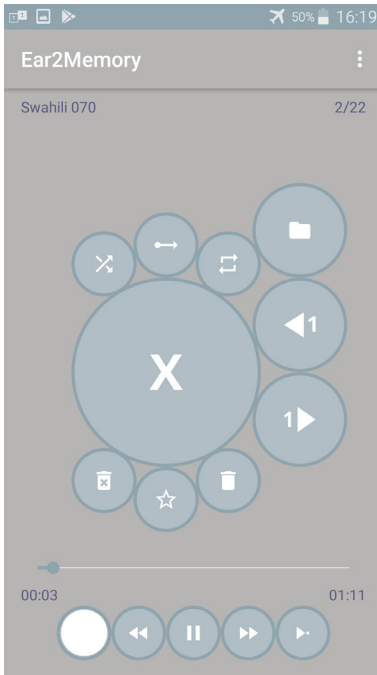
Figure 9.20 – **Long-click** the 'Previous Audio' button to activate smart pauses between snippet repeats.
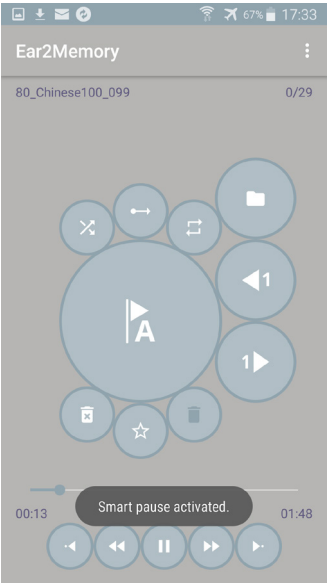
Figure 9.21 – After **long-clicking** the 'Previous Audio' button, a confirmation appears for a few seconds: 'Smart pause activated'.
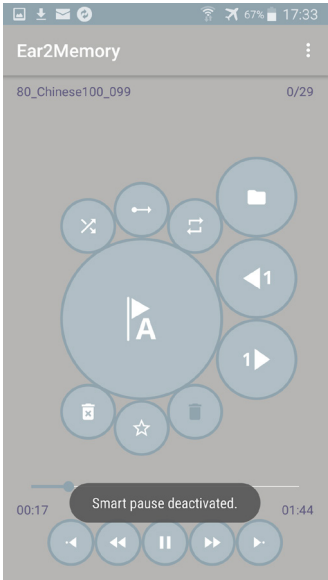
Figure 9.22 – **Long-click** the 'Previous Audio' button again to deactivate smart pauses. The confirmation says 'Smart pause deactivated'.

A smart pause has roughly the same length as the snippet. To be exact, the pause is 1.1 longer than the snippet because 1.1 is Ear2Memory's default value. To change this so-called 'smart pause coefficient', **long-click** the Rewind button (Figure 9.23) and open the menu 'Smart pause coefficient' (Figure 9.24).
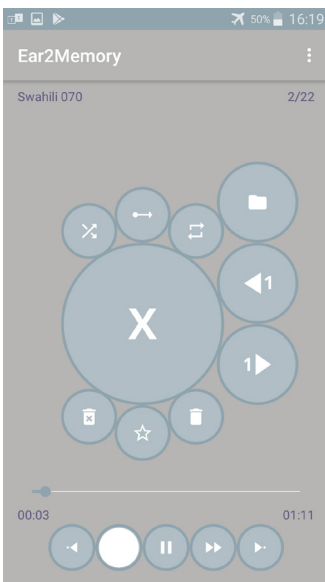
Figure 9.23 – To change the 'smart pause coefficient', **long-click** the Rewind button.
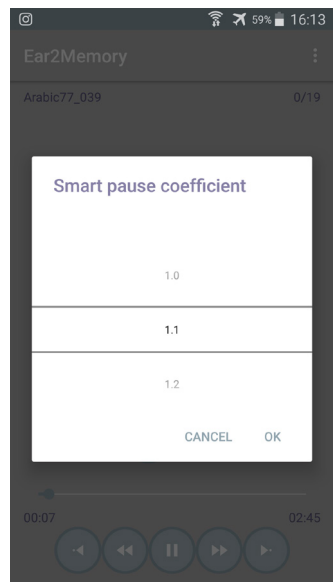
Figure 9.24 – Select a value from 0.5 to 2.0. With a coefficient of 2.0, a smart pause will be twice as long as the snippet.

The higher the smart pause coefficient, the longer the pause. For example, selecting 1.5 multiplies the length of all snippets by 1.5 (see the third shaded column in Table 9.1).

Table 9.1 – Smart pause length (shaded area) depending on snippet length and smart pause coefficient.

		Smart pause coefficient			
		0.5	1	1.5	2
Snippet length (seconds)	1	0.5	1	1.5	2
	2	1	2	3	4
	3	1.5	3	4.5	6
	4	2	4	6	8

Smart pause length (seconds)

9.4 Week 4

This week explores two subtleties of snippet cutting: 'Truncate Snippets' and 'Fast Forward'.

9.4.1 Truncate snippets

Cutting snippets can be delicate, especially when separating sentences or groups of words with hardly any silence in between. Here, when setting the end point for the snippet, even a very short delay in clicking the BigButton may include a short segment of the subsequent sentence. To account for such 'clicking delay', Ear2Memory can truncate snippets automatically. To define the length of the segment to be cut, long-click the the middle-sized arrow button '1◀' (Figure 9.25). Some test persons preferred 100 milliseconds, others 200.
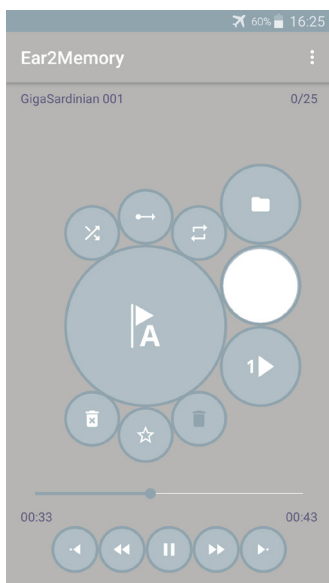
Figure 9.25 – Truncate snippets. Long-click the 'Previous Snippet' button and select a new value (Figure 9.26).
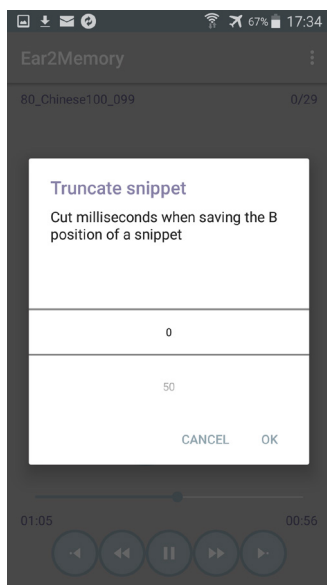
Figure 9.26 – Truncate snippets. Selecting values from 50 to 500 milliseconds.

9.4.2 Fast Forward

The Fast Forward function is useful for people who cut audios into longer snippets (for example, longer than 5-7 seconds). If you **long-click** the middle-sized arrow button '1►' (Figure 9.27), the X of the BigButton turns A and Ear2Memory jumps **two seconds before the end of the snippet you just exited from**. Be ready – within two seconds – to start cutting the following snippet.
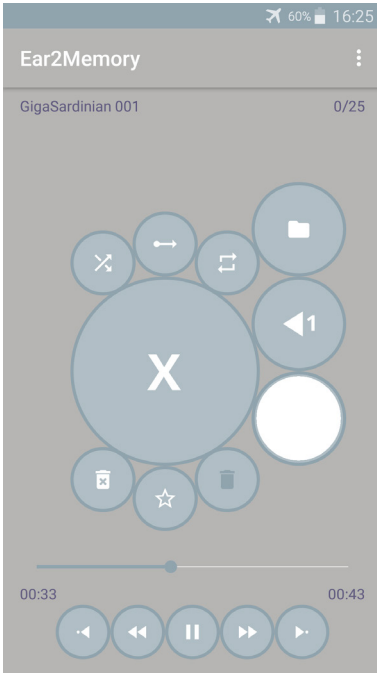
Figure 9.27 – **Long-clicking** the 'Next Snippet' button exits the current snippet and places the cursor two seconds before the end of that snippet.

9.5 Week 5

You have studied at least one month, so time has come for presenting Ear²Memory's microphone. After recording, Ear²Memory plays, alternately, your voice and the snippet. Comparing your voice with the original sound is immensely useful for understanding where and how to improve your pronunciation.

9.5.1 Microphone mode

In the XXL mode, click the Microphone button (Figure 9.28). The microphone symbol turns orange. Now the behaviour of the giant XXL button changes radically:

1. First click: Start recording (microphone symbol turns red; Figure 9.29). Repeat the snippet aloud.

2. Second click: Stop recording (microphone symbol turns orange again). Listen to your voice and compare it with the original sound.

3. Long-click: Play the next snippet.
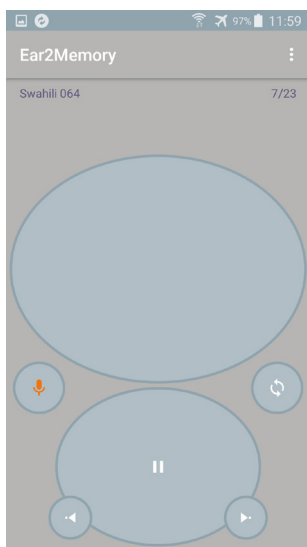
Figure 9.28 – The giant XXL button (XXL) functions differently in the Microphone mode. When activated (microphone symbol appears orange), clicking XXL starts recording your voice (the microphone symbol turns red; see the figure on the right).
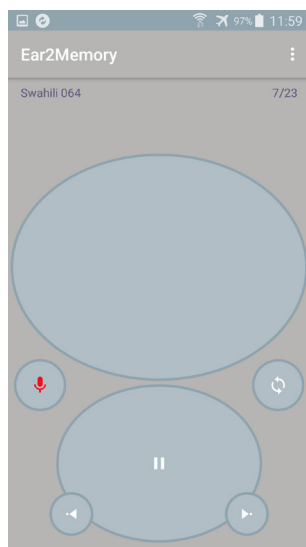
Figure 9.29 – Microphone symbol red: recording! Click the XXL button to stop the recording (the microphone symbol turns orange again; see the figure on the left). Ear^{2}Memory starts playing back, in succession, your voice and the original sound.

To play the next snippet, **long-click** the giant XXL button.

If the quality of your recording is suboptimal, try another headset.

Clicking the *orange* microphone symbol deactivates the Microphone mode.

9.5.2 Shuffle mode

For a more challenging rehearsal, activate Ear^{2}Memory's Shuffle mode and have the snippets repeated randomly (Figure 9.30). Long-click the shuffle button to define the number of times every snippet will be played (Figure 9.31).
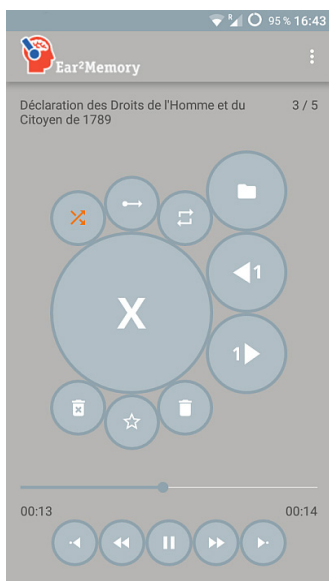
Figure 9.30 – Ear^{2}Memory's Shuffle mode. Snippets are being repeated randomly. **Long-click** the shuffle button to define the number of times every snippet will be played.
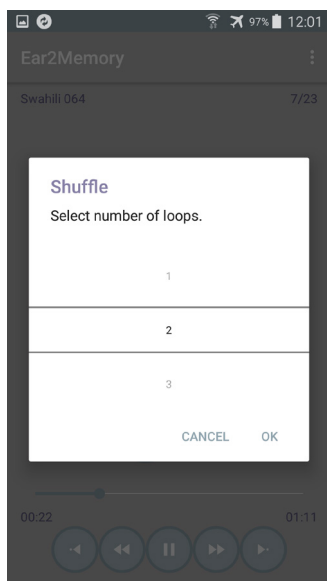
Figure 9.31 – Select the number of times each snippet will be played.

9.6   Week 6

Ear2Memory allows you to save snippets and to restore, import and delete them. Access the snippet management from Menu -> Snippets (Figure 9.32). Snippet files have the extension *.e2m and are stored in the /Ear2Memory directory of your phone or tablet.
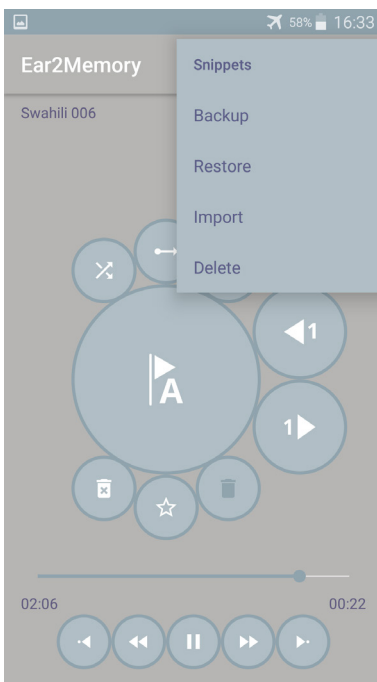
Figure 9.32 – Snippet management. Backup, restore, import and delete snippets.

9.6.1   Backup

We described the important backup function earlier (see Week 2, page 69). Remember the comfortable shortcut: **long-click** the Play/Pause button.

9.6.2   Restore and import

There is only one difference between restoring and importing Ear^{2}Memory snippets: you **restore** files from the */Ear^{2}Memory* directory of your phone or tablet while you **import** them from the */Download* directory. In other words, you would

1. restore snippets you previously saved. These files are located in the */Ear^{2}Memory* directory.

2. import snippets you 1) received via email and saved on your device or 2) downloaded from a website (for example, www.bsk1.com/GigaSardinian001_007.e2m). In these cases, the snippet files end up in the */Download* directory.

Check the file you want to restore/import (Figures 9.33 and 9.34) and click the circle symbol at the top right corner of the screen.

Please note that in some circumstances, downloaded files or files received via email may be stored in directories other than */Download*. In these cases, you would first need to move them here.
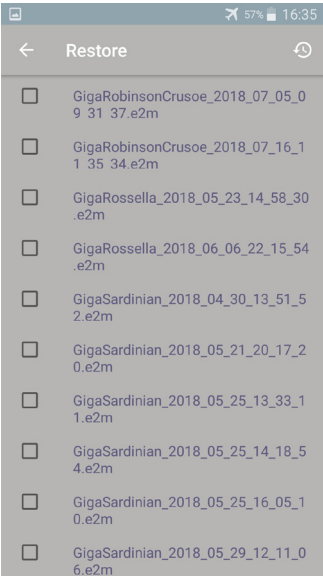
Figure 9.33 – Restoring a previously saved snippet file. Check the corresponding checkbox and click the circle symbol (top right).
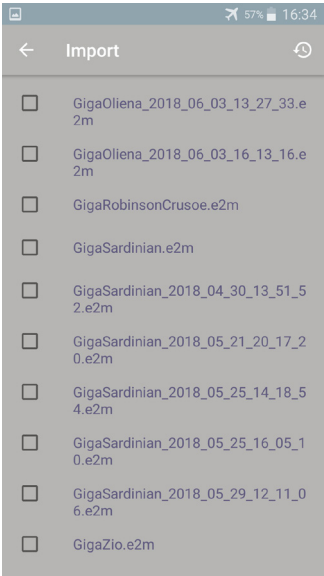
Figure 9.34 – Importing a snippet file you downloaded or received via mail. Check the corresponding checkbox and click the circle symbol (top right).

9.6.3 Delete

In Ear2Memory, you have four levels of snippet destruction:

1. Click the Delete button (see the button overview on page 7) to delete the snippet that is currently being played.

2. Click the 'Delete all' button (see page 71) to delete all snippets of the currently played audio.

3. Open *Menu -> Snippets -> Delete*, select an album and click the delete symbol at the top right corner of the screen. This way, you'll delete the snippets of an entire album (Figure 9.35). You will be asked to confirm your choice.

4. Finally, always on the Delete page, check ALL albums and click the delete symbol at the top right corner of the screen (Figure 9.36). If you confirm, no snippet will be left inside Ear2Memory...

Figure 9.35 – Deleting all snippets of the album 'Chinese 100'. Click the delete symbol (top right) and confirm.
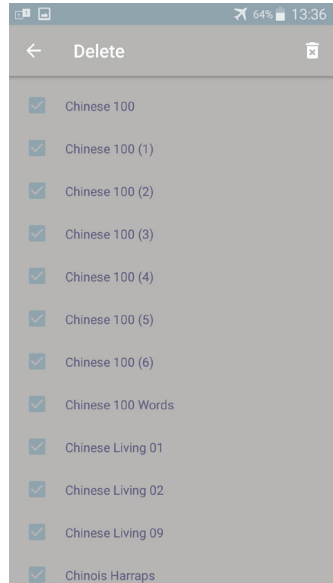
Figure 9.36 – Deleting all snippets of ALL albums. Click the delete symbol (top right) and confirm.

9.7   Week 7

Some snippets are more important than others, for example words or sentences which are difficult to memorize or pronounce. To cope with them, Ear^{2}Memory has the Favorite mode. First, mark your favorites, then play them back.
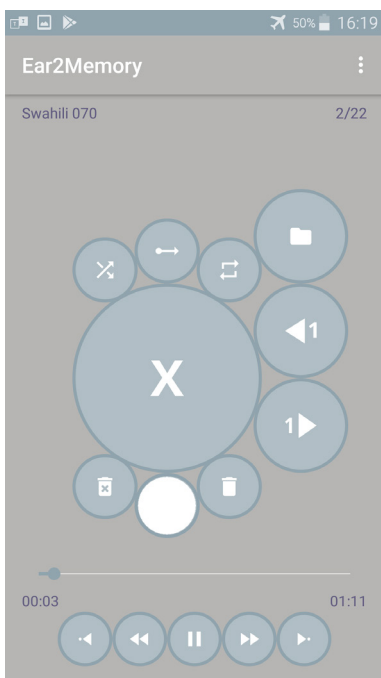
Figure 9.37 – The Favorite button.

9.7.1 Favorite snippets

The Favorite button is centered below the BigButton (Figure 9.37). The star symbol is outlined in white. Clicking it changes the star to outlined orange and marks the snippet as a favorite. The favorite status is also indicated by the orange snippet number (here: '2/22'; Figure 9.38). Click the Favorite button again to 'unfavorite' the snippet.
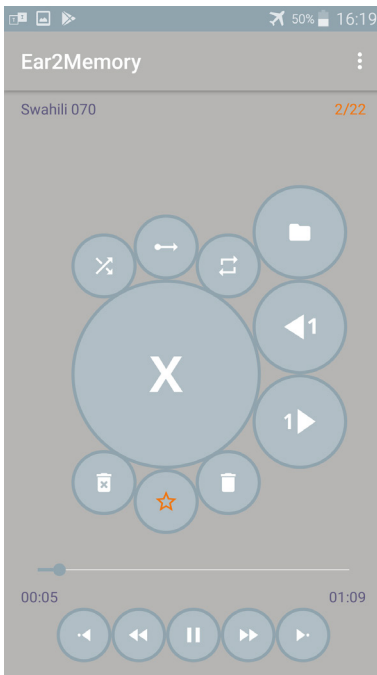
Figure 9.38 – The Favorite button. In this example, the second of 22 snippets has been defined as a favorite. The favorite status is also indicated by '2/22' (right top) displayed in orange.

After defining a few snippets as favorites, **long-click** the Favorite button. The star color changes to full orange, indicating that Ear^{2}Memory runs in Favorite mode. The numbers in the right upper corner (Figure 9.39, '1/3' displayed in orange) indicate that the first of three (favorite) snippets is currently being played.
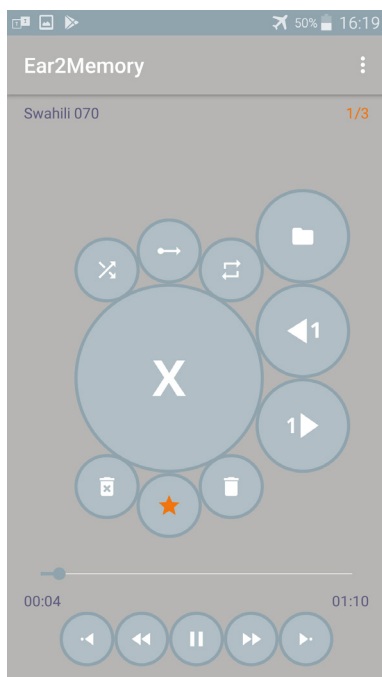
Figure 9.39 – Star symbol plain color: navigating in the Favorite mode. Only favorite snippets are now accessible.

While navigating through your favorite snippets, you can unfavorite snippets at any time – just click the Favorite

button. The plain orange star changes to plain white (Figure 9.40). The changes take effect the next time you enter the Favorite mode.
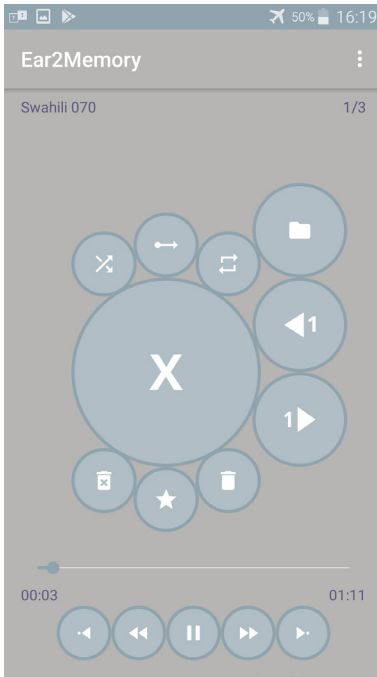
Figure 9.40 – While navigating in Favorite mode, you've just defined a snippet as 'non favorite'.

To leave the Favorite mode, **long-click** the Favorite button.

In summary, the Favorite button comes in four flavors (Table 9.2):

Table 9.2 – The four flavors of the Favorite button. Enter and leave the favorite mode by **long-clicking** the Favorite button.

	No favorite (white)	Favorite (orange)
Standard Mode (outlined)	1	2
Favorite Mode (plain)	4	3

1: Standard mode. Normal snippet, not favorite (outlined white)
2: Standard mode. Favorite snippet (outlined orange)
3: Favorite mode. Favorite snippet (plain orange)
4: Favorite mode. Snippet has just been 'unfavored' (plain white)

10. Tips and Tricks

Week 1: Daily, lonely, focused

Week 2: Don't speak!

Week 3: Multitasking learning

Week 4: Reading, listening, speaking

Week 5: Harvest

Week 6: Words, words, words

10.1 Week 1: Daily, Lonely, Focused

Remember from the *Time* chapter that when you were young, no one would have dared to lock you in a dark basement and cut you off from the world of words and language (page 25). Since you were born, you've heard people speaking every single day. That shouldn't be different for your second, third or fourth languages.

For adults and adolescents, language learning is a **focused and persistent intellectual effort**. This is in stark contrast with the seemingly easy and playful way young children learn languages. In order to learn like a child you would need to be born into a new family, with a new mother, a new father, new brothers and sisters, to be raised with love until the age of 6 and be sent to school for another 10 years. Unfortunately – or fortunately – there is no way of simulating being the new child in a family and in a born-again childhood environment.

Your first Ear^{2}Memory week is crucial because you must reorganize your daily routine. Constructing a suitable study environment includes:

- Reducing or even abandoning other activites such as time on social media, reading online news, etc.;
- Turning off **all** notifications from your smartphone;
- Finding a lonely and quiet place with nobody expecting your paying attention to them.

Daily learning, lonely learning, focused learning... are you ready for this? If you hesitate, think again, because DLF – daily, lonely, focused – is the (only) miracle recipe for fast and efficient language learning. Give it a try. If you do it once, you'll be ready to do it again for yet other languages – and be an example for your children and grandchildren.

10.2 Week 2: Don't Speak!

Please accept this precious advice: don't repeat aloud the words and sentences you hear! During the first weeks of your Ear²Memory program, just listen to the audios and read the texts, but don't speak!

This advice is in total contrast with what language teachers usually recommend. Indeed, they exhort you to produce/speak foreign words the very day you start learning a new language. Don't! Please keep your mouth shut! The reasons for this counterintuitive proposal are multifold:

- You are in no hurry. Completing one of the schemes presented in the *Strategy* chapter (page 51) will take you about 100 hours. Give your brain time to absorb the sounds and music of the new language.

- The longer you postpone speaking, the better your pronunciation will be. Challenging you to utter words and sentences during the first hour of your new language course is like asking a baby on Life Day 1 to utter 'Mum'. You have no chance to get it right! What is worse, you will get accustomed to doing it wrong!

- Finally, when you start learning a language, you don't understand anything. Why would you want to speak if you are incapable of understanding the answer? Don't be a fool: first learn to understand people, then try and make yourself understood.

To find out how complicated listening is, go down onto the streets of a big city or a big tourist area and spot groups of animated people speaking foreign languages. Listen attentively. You will soon notice that humans produce continuous streams of uninterrupted speech. The overall impression? Phonological porridge, polenta, bouillie. If you don't speak those languages, it is hard to imagine that any single language you come across on Earth is as differentiated, distinguished, beautiful, and funny as your native language. Impenetrable as foreign languages appear to be, on the scale of a human lifetime, they are just around the corner – give them two or three years, and any of them is yours. It is a refreshing thought that all humans are brothers and sisters in language.

The porridge-and-polenta feeling is due to speed. Every second, people speak up to three words and more and the only means of deciphering such speedy speech is unconscious processing in your brain. Understanding must be as **thoughtless as driving a car**. If you hesitate about just one single crucial word, the sentence will be gone forever and you will never know what it meant.

Speed of speech has an important implication: unless you get the meaning of 100% of the words pronounced by the people around you, you won't really understand them. That's the reason why language learning requires multiple repetitions and a harsh discipline. As we said, the number of chapter-sessions is around 10 to 15 which means that you'll plough your way through every single chapter 10 to 15 times, and each time listen to the snippets five to 10 times. Is the idea of listen to sentences more than 100

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times repelant to you? There is a good side to it, though: language learning is exquisitely quantifiable. Round after round, inexorably, you'll penetrate previously impenetrable sounds. It is astonishing how fast your brain injects structure into porridge.

10.3 Week 3: Multitasking Learning

In Week 3 of the Ear^{2}Memory discovery (page 76), we drafted an inventory of situations suitable for multitasking learning ('doing something else and listening simultaneously to your audios'). After studying the first chapters four to five times, select 7 of them (see on page 74 how to do so), click both the Repeat and the Continuous button and listen in parallel to other activities (cooking, jogging, driving, etc.). Continue for two or three days with the same audios and move on to the next 7 when you get bored.

The main purpose of multitasking learning is consolidating your knowledge. However, there is a crucial point: you can consolidate only what you've learned before. To maximize the benefit of listening in parallel,

1. Recapitulate a few minutes the audios with the text in front of your eyes; then start multitasking listening. We have outlined a possible scheme – 7 different chapters every three days – in the worksheet www.bsk1.com/multitasking.

2. Adjust Ear^{2}Memory to your present needs deciding on the number of repeats (page 76) and whether activating smart pauses or not (page 80).

10.4 Week 4: Reading, Listening, Speaking

The global goal of language learning can be divided into four distinct tasks:

- Reading

- Listening (to people who speak)

- Speaking

- Writing

Seemingly, reading, listening, speaking and writing are just variations of a common language skill; in practice the differences are immense. First of all, excellence in writing is a result of decades of reading and is the skill you'll bring to perfection last. Second, excellence in speaking is a result of hundreds of hours of intense listening and can be postponed without harm for a few months (see page 117). Your initial focus will therefore be on reading and listening.

As an advanced student, you probably know a fundamental point of language learning: listening is harder than reading. The reason is speed. When you listen to a native speaker, you'll hear three or more words per second. If there is only one key word you don't know, the sentence will remain opaque and unintelligible forever. All you see are the backlights of the 'sentence-train', without time for a second guess and nobody giving you additional clues. You'll never catch that train again.

On the contrary, when you read articles in your new language you can stop the train at any time and linger on

single words until you control, guess or remember their meaning (one second, five seconds, 10 seconds – at your speed). Furthermore, after studying the text a few times, you'll dispose of subtle clues to understanding, for example the number of letters in a word, the position on the page, the vicinity of other words, etc. The consequence: while an approximate knowledge of words is sufficient for reading, it is not sufficient for listening. Listening requires a 100% knowledge of all words.

Consider also that

1. You are a person who loves reading;
2. Reading is one of your favorite pastimes and you have decades of intense reading experience;
3. Today, you read much faster than when you were young.

In other words, you have become a 'reading monster', establishing over your lifetime an express lane for written language to enter your brain. Your monster abilities become manifest after only a few revisions of a given text. Within days, you are able to read and understand it, while you are weeks away from understanding a person reading the text aloud for you. In my personal experience, understanding perfectly people who speak takes at least three times as long as being perfect in reading.

You'll soon experience by yourself that full comprehension of speech requires about ten chapter-sessions and that you will need to listen to a sentence 50, 100 or even 150 times – today, tomorrow, next week, next month – until you can distinguish **every single word**! If that seems enormous to

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you, consider that it takes a monumental 1,000 to 2,000 hours to be fluent in understanding like a native speaker. The good news: listening to your audio files in parallel to other activities (page 108) means that you don't need to allocate extra 1,000 to 2,000 hours hours for speech comprehension. Instead, you'll be able to dissolve the bulk of your 'speech recognition program' within your daily life (like a murderer dissolving a corpse in a bath of acid!). Just put your earphones, sprinkle your brain with hours of speech audios and let time to do its work.

Speaking fluently will take you even longer than understanding speech. It's the fault of anatomy and physiology. They make it easier to let sounds come into your brain than let them out. To let human speech in, all you need is an eardrum, three tiny bones in your middle ear, and the so-called cochlea. These structures amplify the sounds, and transduce them to electrical signals for the brain where they are immediately interpreted. This is a straightforward process, and apart from your ears and your brain, nothing else is involved. In comparison, speaking requires sophisticated mechanics. To proclaim the resolutions of your brain to the world, you have to co-ordinate dozens of muscles in your larynx, pharynx, neck, cheeks, mouth, and tongue. Putting all these pieces into the perfect position in a minimum amount of time is a remarkable acrobatic performance, and even children need years of exercise. In fact, only at around the age of ten do they start speaking like adults.

From the very beginning, comprehension has a head start over speech production – when you stutter your first

barely intelligible sounds, you already possess a vast passive repertoire of hundreds of words. The disparity between good language comprehension and poor language production usually persists throughout a lifetime.

Speaking skills have another disturbing characteristic: they are subject to heavy erosion. Stop speaking a second language for a decade or more, and even simple words such as 'Goodbye' are suddenly irretrievable. At the same time, listening and reading skills are hardly impaired. It seems as if once you acquire the ability to *understand* with native-like proficiency, you have acquired it for life, like riding a bicycle. The speaking abilities, on the contrary, need continuous stimulation to be maintained.

There are two explanations for this phenomenon. The first is quantity. Unless you are incorrigibly talkative, listening is the predominant function mode of your word brain. As soon as you find yourself in a group of at least three people, the odds are that you will listen rather than speak. The bigger the group, the smaller your contribution. In some situations – at school, university, or during meetings at work – you could listen for hours, and nobody would expect you to contribute more than a word or two. As a result of years of listening, the part of your word brain that processes sounds is better trained than the part that produces speech.

The second reason is diversity. The words put into your brain are more diverse than the words coming out of it. You have only one life to tell – your own – while your co-humans make you listen to hundreds of different lives in different places and in different circumstances. You know

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words annunciated by fascists, fundamentalists and populists that you wouldn't want to ever pass your lips. You know hundreds or thousands of words from listening to priests, rabbis, and imams, but, again, you would not want to use them yourself because, as a scientist, you feel that God and the gods exist because our ancestors had the wisdom to create them. This list can go on and on, including people from different professions, geographical regions, age groups, etc. Because of the huge variability of human biographies – sometimes disgustingly ugly, but most often creative, stimulating, and refreshing – you know thousands of words you will never utter. What you know of the world is more than what you can say about it.

In conclusion, the ranking of skills from the easiest to the most difficult one:

1. Reading
2. Listening (to people who speak)
3. Speaking
4. Writing

10.5 Week 5: Harvest Time

Ristening (simultaneous intense reading and listening) produces astonishing results:

1. To understand the sound of a text you have to know all the words. As one hour of audio contains between 1000 and 2000 unique words, intense reading and listening is an excellent way to **quickly learn new words**.

2. Listening to short portions of an audio file 50, 100 or more times will end up giving you an intuitive knowledge of important aspects of grammar. You'll certainly need to study a more complete grammar later, but many rules you come across will then be already familiar. In any case, **grammar will be easier and more pleasant**.

3. Ristening is the best conceivable training for good writing. Your **spelling skills will be excellent.**

4. Risten, but don't speak. As you have an entire life to speak your new language, there is no need to start speaking today. Give your brain time to absorb the correct pronunciation of single words and the characteristic sound of your new language. Just sit and wait, do a few months of intense listening and reading – **you'll have a more genuine accent**.

5. Having experienced Ear^{2}Memory's intense reading and listening procedure in your own skin (and in your brain) will be an incentive for learning more languages! For all future language projects, you know

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what you can achieve and you know the time you need. You'll have acquired **a precious tool for future study**.

10.6 Week 6: Words, Words, Words

Whether you read or listen, you won't understand anything unless you know the meaning of the words – lots of words! What is more, knowledge of any single word must be precise, doubtless and immediate, in other words, a perfect 100%. If you miss a single word, either you don't understand what people told you or you stumble on subtleties. That's unacceptable.

If words are the fundamental building blocks of language, you'll be curious to figure out

1. how many of them you need to know?
2. how long it will take to learn them?

To be comfortable in another language you need roughly half of the 50,000+ words you master in your native language. This is an immense figure and, indeed, words are the number one, two, three and four problem with language learning. Fortunately, mastering the words is, as you'll see on page 129, exquisitely quantifiable.

11. Speaking

Start speaking after about 50 to 100 hours of ristening (definition: page 33).

Speaking supposes

1. The perfect coordination of your lips and tongue;
2. Pronouncing syllables of various length; and, finally,
3. Varying the pitch of your voice.

As these are too many variables, go step by step: first, spend a few weeks on moving just your tongue and lips (although not in public as people might consider you 'touched'!); later, add the sound.

After a few rounds enter the XXL mode (see page 82), activate smart pauses and repeat the snippet during the pause, first while reading the text simultaneously, then without reading. Later, go a step further still: increase the speed of your speech and repeat the sentence twice and may be even three times during the pause. The final step would be to return to Ear^{2}Memory's standard mode, play the entire audio (BigButton: 'A') and – like a simultaneous translator – repeat aloud what you hear.

The complete guide to speaking in short:

1. Move only lips and tongue.
2. Add sound.
3. Repeat during smart pauses (page 82). During the pause
   a. Repeat the sentence while reading the text

b. Repeat the sentence *without* reading the text

    i. Repeat the sentence twice

    ii. Repeat the sentence three times

4. Return to Ear^{2}Memory's standard mode, play the entire audio (BigButton: 'A') and – like a simultaneous translator – repeat aloud what you hear like a simultaneous translator.

11.1 Learning by heart

Now you are ready for the ultimate speech exercise: learning by heart, first a few sentences, then an entire audio of one to two minutes. If you usually shy away from learning by heart, give it a try anyway because

- It helps you understand the audios even better;
- You'll arrive at a 100% understanding of all words;
- It provides you a template for future real-life communication;
- It is an excellent memory exercise.

Learning by heart is a good demonstration of how fast we forget. Try this one: read and listen to a sentence several times, then repeat it aloud without reading the text. After a few attempts, the sentence pours out of your mouth like water from a spring. Now go on to the next sentence and repeat the procedure. Again, after a few trials, you'll recite the sentence with no problem. And now... return to the first sentence and repeat it **without reading**! Surprise: chances are high that revising Sentence 2 made you forget

Sentence 1. The solution: switch back and forth between both sentences until you always get them both right. Next, proceed to Sentence 3, switch back and forth between Sentences 2 and 3; proceed to Sentence 4, etc. This idea will take time but is remarkably efficient.

How exactly you learn an audio by heart is up to you. Personally, I prefer spreading the effort over several chapter-sessions and

1. Repeat the exercise described above over the following days.
2. Finally, recite the text from memory.
3. Keep the memory alive by reciting the text anew from time to time.

12. Progress

Remember the 'island uplift' image. Like tectonic uplift, understanding a new language is a slow process: first a word, then a couple of words and half sentences; finally, complete sentences and paragraphs and, finally, a whole text!

While this process may seem to be slow, in reality your brain is working at full throttle and executing acrobatic feats. Not only will you learn more than 1000 new words within a few months, you will also reduce the 'time-to-response' between hearing a word and understanding its meaning, from several seconds to less than 0.2 seconds. As a matter of fact, the *knowledge of words* can vary widely, from *low, intermediate, high* to *perfect*. The definitions:

Table 12.1 – Time to understanding and degree of knowledge.

Time to understanding	Category	Degree of knowledge
5 seconds	Low	Almost useless
1 second	Intermediate	Intermediately useful
0.5 seconds	High	Highly useful
0.2 seconds	Perfect	Perfection

As you see, there are highly different degrees of knowledge. As a novice it may take you up to 5 or 10 seconds before finding a foreign language equivalent of

corkscrew (German: Korkenzieher; French: tire-bouchon; Italian: cavatappo; Portuguese: saca-rolhas; Spanish: sacacorchos; Russian: штóпор). Months and dozens of bottles later, you'll do it in less than 0.2 seconds. That's a spectacular improvement of more than one order of magnitude, courtesy of your brain, the most complicated structure in the known universe.

Ear[2]Memory allows you to adapt to the different degrees of knowledge. First, at the beginner's level, after cutting the audio with the BigButton into snippets of suitable length, you'll use the Arrow buttons '1►' and '1◄' to browse the snippets and repeat them until you clearly remember which sound corresponds to which word; what the words mean; and what the correct spelling is. You'll probably stay at the beginner's level for a few weeks. Repeat the 'Arrow Session' for every audio at intervals that would ideally be no longer than 5 days.

12.1 Preliminary Exam

After several chapter-sessions, usually four to 7, you won't need the translation anymore because you know the text by heart. Now do your first preliminary test: close your eyes, play the next snippet and listen. Do you understand every single word? If you don't, open your eyes again and read the sentence several times.

You can do this preliminary test in different ways:

1. **Arrow Mode.** Browse the snippets and listen – eyes closed – the number of times you need.

2. **Repeat Mode.** Long-click the Repeat button (right above the BigButton, Figure 12.1) and set the number of loops to 3. Then (single-)click the Repeat button and listen without reading. Getting a triple shot will often allow you to understand most snippets word by word.

3. **Shuffle Mode.** This is the most difficult mode. Long-click the Shuffle button (left button above the BigButton, Figure 12.2) and set the number of loops to 3. Then click the Shuffle button and listen without reading.

Later, reduce the number of loops to 2 in both the Repeat and the Shuffle mode. With only two opportunities, understanding is more challenging.

If your language manual has word lists, check them regularly because you cannot understand 100% of a spoken script if you don't know 100% of the words.
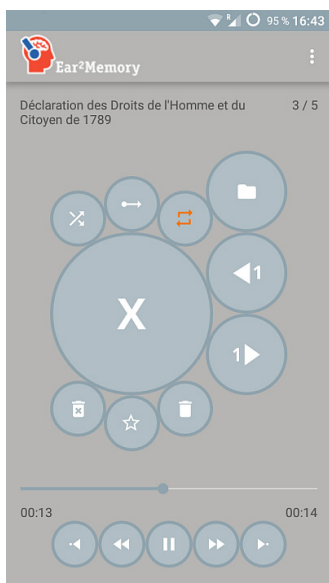
Figure 12.1 – Ear^{2}Memory Repeat mode.
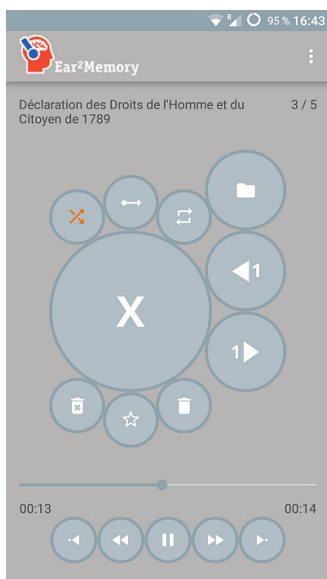
Figure 12.2 – Ear^{2}Memory Shuffle mode.

12.2 Final Exam: Champagne!

After a few preliminary tests with the repeat and shuffle mode (see above), you'll be ready for the final exam of your first audio file. Play the audio *normally* (without repeating the snippets), **close your eyes** and listen until the end. Question: Have you, yes or no, understood every single word?

If you have, you have conquered your **first island of total understanding** in a new language! This is an exceptional achievement because it doesn't happen often in a lifetime.

As you will remember it forever, celebrate it with champagne!

In my personal experience, it takes about 10 sessions to get to a 100% understanding of an audio (see the appendix 'Law of second language acquisition', page 156); however, such intensive repetition may be partly due to the fact that I am 49+ years old. If you are younger, especially if you are in your late teens or twenties, you might need a few sessions less.

Please don't stop at your first experience of 'total understanding'. Give your brain time to strengthen the connections (synapses) between the brain cells involved (neurons). Copy the audio file into a separate playlist on your smartphone. Over the coming weeks, the playlist will grow longer with more 'newly conquered audio territories'. Make it a habit to activate the 'Continous Repeat' mode and listen to the playlist while you are in your car, on public transport, during other activities (cooking, jogging, etc.), even while enjoying a siesta. We have known people who used Ear^{2}Memory's repeat mode as 'sleeping pills' to fall asleep faster! Activated smart pauses (page 82) seem to enhance the efficacy of the 'pills'. Give it a try... ☺

13. Phase II: Advanced Level

After finishing the first manual you have achieved

- Total understanding of one or two audio hours
- A satisfying 'feeling' for grammar
- Excellent reading and spelling skills

This Phase II will include

- Studying a grammar overview of at least 200 pages
- Reading and listening to bilingual audio books
- Studying an advanced language manual, provided that it offers **ATT** (**A**udio + **T**ranscription [= Text] + **T**ranslation).

To my knowledge, the only manuals satisfying these requirements (and promising a B2-C1 level) are from the 'Assimil Perfectionment' series:

German native speakers

- **Assimil in der Praxis**
  Englisch, Französisch, Italienisch, Spanisch.

  Link: www.assimilwelt.com

English native speakers

- **Assimil C1**
  French

  Link: www.Assimil.com

French native speakers

- **Assimil Perfectionnement**
  Allemand, Anglais, Arabe, Espagnol, Italien, Russe.

  Lien: fr.assimil.com

Italian native speakers

- **Assimil Perfezionamento**
  Arabo, Francese, Inglese, Russo, Spagnolo, Tedesco.

  Link: www.assimil.it

Spanish native speakers

- **Assimil Perfeccionamiento**
  Francés, Inglés

  Enlace: fr.assimil.com

14. Phase III: Expat Level

Have you ristened (definition: page 33) your first and second language manual? Then it may be time to say good-bye. Your total understanding of several hours of audio tracks, your beginning speaking skills and intuitive grammar competence and, finally, the 3,000-4,000 words you know are more than enough for holiday contingencies and even month-long business missions. Thanks to Ear²Memory, you will recall language learning as a comfortably manageable burden.

However, three to four thousands words are not enough if you choose to become an expat, living abroad for years or maybe for the rest of your life. Now you must decide whether to remain a lingustic and, consequently, social outsider or try as hard as possible to fill the gap between the people of the country and yourself. The nature of the gap? Tens of thousands of words the natives know and you don't.

In the first chapter of *The Word Brain* (free download from www.TheWordBrain.com), I said that between 2 and 18 years, you learned 10 new words every day. Later, at work or at university, you enriched your brain vocabulary with thousands of technical words. Today, after decades, you know more than 50,000 words of your native language. To be comfortable in another language you need roughly half of the words you possess in your native language – 25,000. As about 40 percent are variants of other words and can be easily inferred, a good estimate of truly unique words you need to start with is 15,000 words. This is double what you

are expected to learn in 8 years at school and it comes at a remarkable 'time price': 750 to 1,500 study hours.

The immediate consequence is that, from now on, language learning will be a do-it-yourself job even more so than before. Thousands of words are currently *outside* your word brain and must get *inside*. Nobody, except you, can do this job. Be prepared to spend hundreds of hours alone with your language manuals, smartphone and dictionary. Teachers are of little help (fortunately so; imagine the tuition fees for up to 1,500 hours!).

In *The Word Brain*, you read also that words are the fuel of language and the number of words you are familiar with determines your language abilities. The more words you know, the better you are:

15,000 > 10,000 > 5,000 > 2,000 > 1,000 > 500

Firmly wiring thousands of new words into your brain is an immense undertaking. Does it mean that you've arrived at the edge of an immense word desert and that the fun part of language learning is over? Let's analyze your situation:

1. How could you possibly transfer into your long-term memory thousands of words you have never seen before?
2. How long would it take?
3. What factors could influence the total study time?

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14.1 Reading, Reading, Reading

Think about how you acquired a huge treasury of around 50,000 words in your native language. Did you so by chatting and joking and listening to friends and family? You didn't! You *did* absorb thousands of words by intense and focused reading at school and at university in 15 to 20 years. Consequently, in your new language you are expected to perform a similar feat, but in no more than two, maximum three years. Remember that language learning is an exercise in time compression.

The two most promising avenues of study are reading and word lists.

14.1.1 Reading

Read whatever text you like, one to five hours a day, and

- Find and underline/highlight every day at least 100 unknown words;

- Look them up in an online or paper dictionary (ideally, online dictionaries should give you the pronunciation; see for example wordreference.com) and mark them there as 'having been looked up';

- write the words and the translations on a sheet of paper or in a digital document;

- find a way to classify these papers/documents;

- revise the word lists at regularly intervals until you know all words a 100%.

Within 6 to 12 months you will substantially enlarge your vocabulary.

14.1.2 Word lists

Word lists, ordered by subject and presenting more than 5,000 words, are available only for a small number of languages in a small number of countries. In Germany, for example, Klett Verlag sells editions for English, Spanish, French and Italian which include CDs with the pronunciation of all 12,000 words! Open www.bsk1.com/klett and browse the book. Find out if there are equivalent books on your local markets.

At first, read the words attentively one after the other. Check the spelling, imagine the sound of the word and make a guess at the resistance a word is likely to oppose: easy to learn or not? Four-syllable words such as *perseverance* will demand more time than monosyllabics such as *and*, *or*, and *but*. Go through the list a second and third time, either line-by-line or jumping around from word to word. Push the words around in your mind, squeeze them, press them, and stretch them. Finally, test yourself by covering first the right column and then the left column. During the first learning session, aim for at least at 80% correct answers.

As thrilling as 80 percent results are, the first learning session is only the starting point for a weeklong consolidation process. Memory wants to be rebooted. After a single day, the percentage of correct answers is dramatically down, and after one month, recall may be 20 percent or less. As learning is nothing and recall is

everything, the second pillar of word learning is repetition. Find out which strategy fits you best, either daily repetitions or repetitions on day 1, 3, 6, 10, 17, and 31, or any other regime. You will soon notice that after every re-exposure, memory traces are easier to reactivate.

14.2 Time Frame

How long will it take you to learn 15,000 words? First, imagine the following scene:

> It's 3 o'clock in the morning and you're profoundly asleep. You don't hear me when I enter your room and slowly come up to your bed. When I suddenly turn on the lamp and grab your shoulder, you jump out of bed, frightened and panicked. I show you something and bellow one single question: 'What is this?'
>
> You answer 'A corkscrew!'; or 'Ein Korkenzieher!' if you are German; or 'Un cavatappo!' if you are Italian, '¡Un sacacorchos!' if you are Spanish, 'Un tire-bouchon!' if you are French, and so on.
>
> 'Good', I say, and you close your eyes and fall directly, contentedly, back to sleep within seconds.

Why construct such a surreal nocturnal encounter? Because it illustrates the way we know words:

- spontaneously,
- in the most extreme of situations,
- without giving a second thought to it.

That's also the way you'll have to know words in your new language: intuitively and explosively. To achieve such 0.2-second perfection, you need **multiple exposures**. Over

time, these exposures may sum up to a mean of around 6 minutes per word. At a word-learning speed of 10 words per hour, memorizing 15,000 words would take you 1,500 hours. In-depth learning of new languages is one of the most time-consuming tasks in life.

One thousand and five hundred study hours might demoralize more than a few students – after all, that's an hour per day, Monday to Friday, over 6 years or 6 hours a day for an entire year. Let's investigate if we can identify factors that might modify the two critical variables of language learning:

1. Total number of words
2. Number of words 'memorizable' per study hour at 0.2-second precision

To investigate possible 'time discounts' for the murky 1,500 hour prospects, let's check

1. The relationship between the new language and the languages you know
2. Your age
3. The writing system of your new language

14.2.1 Relationship of your new language

Fortunately, some languages *do* come with hefty 'discounts', in the sense that not all 15,000 words should be considered *truly new words* because you can deduce them easily from other languages you are familiar with. If you ask a 17-year-old French student without previous exposure to Italian to screen an Italian dictionary, he will

immediately be able to tell you the meaning of about 6,000 words. Take the word *evolution.* In Spanish, Italian, and French, the word translates into *evolución*, *evoluzione* and *évolution.* As you can see, many words are almost identical between some languages and come with just slight differences in packaging. Provide the student with additional clues on how Latin words evolved differently, but still recognisably, into French and Italian, and he will increase his vocabulary to around 10,000. In other words, to start being comfortable in Italian, our French teenager would need to learn just 5,000 words. The same is true for any Italian, Spanish, Portuguese or French learning any of the other three languages.

In the same way, an Arabic native speaker would have a handsome discount for Swahili where from a quarter to a third of all words are from Arabic origin.

On the contrary, people from Western Europe have no discount at all when starting Russian, Turkish, Hindi, Chinese or Japanese; here, only few words resemble the words they know from their native language or languages commonly learned later in life. In these cases, they need to learn all 15,000 – a process that will keep them on their toes for years (Table 14.1).

Table 14.1 – 'Word load' for a Paris teenager and total study time (months) with one or two daily study hours.

New language	Total word load	Total study hours	Total study time (months) with	
			1h/day*	2h/day*
Spanish, Italian, Portuguese	5,000	500	2 years	1 year
German, Dutch	10,000	1,000	4 years	2 years
Chinese, Hindi, Bengali, Japanese, Russian, Turkish… and more than 99% of all languages!	15,000	1,500	6 years	3 years

* One or two hours per day, respectively, 5 days per week.

Depending on the languages you know and those you want to know, there is a 3:1 time ratio: distant languages will take you roughly three times longer than nearby languages. What you achieve in 18 months in an 'easy' language will take almost five years in a 'difficult' one.

The figures shown above are for people in their late teens and early twenties. Did you say that you were noticeably older? Then take your breath before reading the next paragraph.

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14.2.2 Age

It is no mystery: younger people memorize faster and longer than older people. Fortunately for the latter group, differences are negligible – older people may need twice as long or slightly longer before learning entirely new words. However, what is largely irrelevant in everyday life becomes a watershed when dealing with mountains of knowledge, precisely those 15,000 words language learners must lodge into their brain, all retrievable below the 0.2-second threshold.

If you find Table 14.1 terrifying, what would you say of Table 14.2?

Table 14.2 – 'Word load' for a student 50 years or older from a Western Mediterranean European country and total study time (months) with one or two daily study hours.

New language	Total word load	Total study hours	Total study time (months) with	
			1h/day*	2h/day*
Spanish, French, Italian, Portuguese	5,000	1,000	4 years	2 year
German, Dutch	10,000	2,000	8 years	4 years
Chinese, Hindi, Bengali, Japanese, Russian, Turkish… and more than 99% of all languages!	15,000	3,000	12 years	6 years

* One or two hours per day, respectively, 5 days per week.

Here we simply divided the speed of learning by two, from 10 words per hour down to 5 words per hour. The consequences are dire: the older you get, the more languages seem to become out of reach.

There is one glimpse of hope, though, even for seasoned language aficionados. In my personal experience, Phase I of language learning – fully understanding the audio tracks of a first language manual – is comparable in time and effort across languages as different as Norwegian, Greek, Russian, Turkish, Japanese, Chinese and Swahili (see page 156). This utterly counter-intuitive finding is probably due to the fact that the bottleneck in **early** language learning is listening comprehension of speech produced with up to three or more words per second. I am also tending to postulate that young people in their twenties don't have a huge advantage in this, indicating that learning to understand people who speak is less eroded by older age than memorizing words. If this were so, an explanation of this discrepancy may be found in the structure and functioning of the human brain. As a matter of fact, incoming human speech is being processed in a vast area of the temporal lobe while memorizing new words depends on the proper functioning of fairly tiny cell populations in and around the hippocampus. The proper functioning of the hippocampus (so central to the transfer of information from short-term memory to long-term memory) is unquestionably at greater risk of degeneration than the far greater speech processing area in the temporal lobe.

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In other words, for accomplished adults the glass is half-empty and half-full. No, in a 'difficult language' (with 15,000 words to absorb) you will not be able to achieve anything comparable to quasi-native fluent speech; this feat is reserved for people in their teens and twenties. But yes, at ANY age you can acquire more than decent language skills that are superior to those you had when leaving school after 5 to 8 years of language teaching.

Doesn't sound so bad, does it?

14.2.3 Different writing system

Decades of reading the Latin alphabet have conditioned your brain for high-speed deciphering of words from any language that uses this alphabet, even roadblocks such as *leszállópálya* and *megfigyelőképesség*. Exactly how familiar and how tremendously important the Latin alphabet is becomes evident if you step up your language ambitions and select a language with

- Totally unfamiliar words
- A different alphabet
- An alphabet with the annoying habit of skipping half of the vowels.

The result: Arabic. In Arabic you will discover, much to your dismay, that you need to know the function of a word within a sentence – is it a noun? is it a verb? is it the active or passive voice of a verb? – BEFORE you can infer the correct pronunciation. As a consequence, reading, which is supposed to support you during the learning process, is

frequently of no help at all, because you actually need to know what you are learning before you can read it. The previous sentence sounds complicated, doesn't it? Well, that's exactly how complicated reading and learning a language is when 50 percent of the vowels are left to the beginners' guesswork. Anticipate one to three years of extra study time.

The challenge of different writing systems is indeed immense. (Chinese and Japanese are other examples.) Imagine painting the façade of a building while standing on a solid scaffold – the Latin alphabet is exactly this solid scaffold. Now imagine painting the same building without a scaffold, just attached to a rope fixed to the chimney. The second procedure is clearly more exhausting and agonisingly time-consuming. Just to make sure that you are not left with any false delusions, add the following facts:

1. Written Arabic is spoken nowhere except on TV and at meetings or presentations;

2. In order to speak everyday Arabic you have to learn additional country dialects which in practise amounts to learning another language (like learning Italian once you have learned Spanish);

3. In Arabic-speaking countries, there is less opportunity to visit provinces and cities with the fascination and vibrations that inspire dreams of fabulous 6-month full-immersion experiences typical in Tuscany, Dordogne, Seville, Berlin,

Edinburgh, Freiburg, Orgosolo, Amsterdam, Stockholm, or Lisbon...

– and you swiftly realise that you need to have pretty good reasons to start learning Arabic. In any case, don't wait until you are 50.

Now you know all the secrets of Ear^{2}Memory:

1. Ristening
2. Postponing speaking
3. Multitasking learning
4. Learning by heart
5. Absorbing mountains of words
6. Appreciating the impact of age
7. Forecasting total study time

At this point, you are fit to teach your friends and family how to benefit from Ear^{2}Memory.

15. Teaching with Ear²Memory

Teaching languages with Ear²Memory includes technical and conceptional aspects. The technical aspects are straightforward:

- Install Ear²Memory
- Transfer audio files to their mobile devices
- Import snippet files (if available)
- Cut the audios into snippets

Conveying the conceptional aspects is more demanding. You'll need to have your students accept that they will

- Study every day 30 to 90 minutes
- Find a suitable study environment without interference from the outside world (no friends or family around, switching off social media!)
- Read the text and listen several (5-10-15) times to every snippet until they
    - Figure out which word corresponds to which sound;
    - Understand the meaning of the words;
    - Memorise the spelling of the words;
- Repeat this exercise for every single audio file at least 10 times over the coming weeks and months.
- Fill in a worksheet to document the number of study minutes per audio and day.
- Start speaking after 50 Ear²Memory hours.

Explain to your students that the first 7 days are the critical period and that they must persevere at any cost. If over time – weeks, months – they show signs of saturation or outright rejection, concede them a pause.

Finally, describe to your students the extraordinary feeling of conquering, one after the other, 'islands of total understanding'.

15.1 Personal Ear^{2}Memory scheme

Designing personalized study scheme for your students will take into account that

- each chapter should be repeated within 5 to 7 days
- each chapter should be repeated at least 10 times

The scheme you'll propose depends on the daily study time. Our recommendations:

90 minutes:
- 1 block / 7 new lessons per round: www.bsk1.com/ws9001

45 minutes:
- 2 blocks / 4 new lessons per round: www.bsk1.com/ws4501

30 minutes:
- 3 blocks / 3 new lessons per round: www.bsk1.com/ws3001
- 2 blocks / 5 new lessons per round: www.bsk1.com/ws3002

Students usually appreciate being coached remotely, so ask them to have access to their worksheet. Check the worksheets every day and contact students who stop studying on three consecutive days. Adapt the scheme as needed.

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At regular intervals, comment on study progress and outline future strategies. Be generous in your comments! When modifying the study scheme, indicate with an x the lessons your students should learn on the following days.

After a few months, complete your student's Ear²Memory routine – taking in, day after day, the sound, meaning and spelling of words – with 1) background listening (while jogging, driving, shopping, etc.; see page 76) and 2) speaking (page 105 and 117).

15.2 Losing Money

In outstanding situations – for example children learning unusual languages – don't hesitate to pay them for their efforts. In September 2017, I offered Félix, a French boy, then 12 years and 9 months old, to study Chinese with a manual of the Assimil series. The conditions of the deal:

1. Study without any help.
2. Study not less than 30 minutes before going to school.
3. Cash in 10€ per hour.

One year, 100 Ear²Memory hours and 1,000 Euros later, the precocious student from Paris had reached lesson 92 out of 100 and was achieving total understanding of the first 50 lessons. Find his worksheet at BSK1.com/ChineseFelix.

Juvenile brains have an amazing plasticity. Think about helping adolescents you adore (children or grand-children…) to cash in on that plasticity. Exceptional knowledge acquired at a young age has no price!

15.3 Earning Money

In the fourth chapter of *The Word Brain* (download the free PDF from www.TheWordBrain.com) I described the world of language teachers and discussed their possible future. I stated that in a multimedia environment with an ever growing body of free teaching material, language teachers will either evolve into coaches or disappear. Ideal coaches will present the following characteristics:

1. They can prove that they know the tips, tricks and traps of language learning. Apart from their native language, they speak at least one language fluently and have recently learned new languages.

2. They command a compact training system such as Ear^{2}Memory.

3. They are aware that language learning is exquisitely quantifiable and know how to design individualized study schemes for their students.

4. They have sublime motivating skills.

5. They are humble and don't make a fuss of their language skills. Speaking multiple languages is not exceptional – it is just the consequence of thousands of study hours. Language coaches should always insist that people who learned their first language – their mother language – are entitled, even as adults, to learn any language on Earth!

16. Finding a Language Coach

(Read also Chapter 4 of *The Word Brain.* Free PDF: www.TheWordBrain.com)

Be prudent in choosing the people who will help you learn new languages. In today's multimedia world, typical 20th century language teachers will progressively disappear and their place be taken by language coaches.

Which tasks should 21st century coaches provide? Depending on your previous exposure to your native and subsequent languages, they will

- prepare an individual time schedule for your project;
- recommend books, podcasts and audio books;
- provide the first round of grammar;
- advise you on how to manage your daily word quota;
- teach you how to check that new words have arrived in your long-term memory;
- demonstrate common pronunciation pitfalls.

For the first few weeks, plan daily encounters or two or three lessons per week. Thereafter, reduce to weekly encounters. Finally, after the third or fourth month, one or two meetings per month will be sufficient. During the entire course, check the motivating power of your coach. If you have the feeling that he doesn't motivate you or, worse, makes you feel like a donkey, fire him.

The four key bits of advice:

1. Avoid bored and/or boring teachers.
2. Insist on an initial quick grammar overview. Grammar is not a black hole. The number of problems you need to resolve is finite.
3. Opt for the coach model and limit the number of lessons. First month: 10-20 lessons; second and third month: 4 lessons; fourth month and later: 1 to 2 lessons.
4. Make sure that your coach explains grammar in your native language.

17. Overview

17.1 Standard Mode

The buttons you'll use most often (Figure 16.1) are: Folder (1), BigButton (2), Delete (3) and Right Arrow (4).

Note that all buttons have **long-click** functions (Table 17.1).
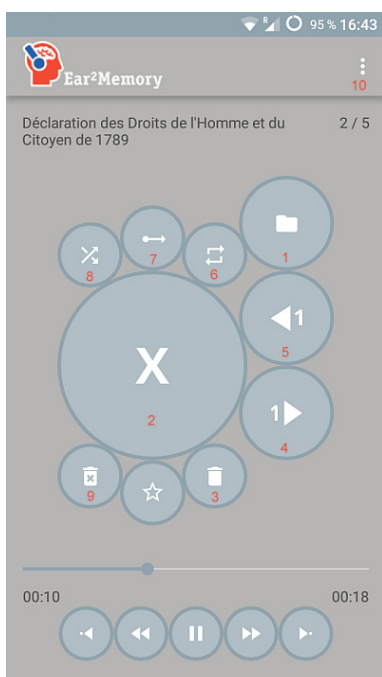
Figure 17.1 – Ear^{2}Memory buttons by order of first use

Table 17.1 – Single-click and long-click functions

	Function	
	Single-click	Long-click
1	**Folder** – Select an audio file (page 74).	Switch between 'Standard mode' and 'Minimal mode'. No recording of snippets in the Minimal mode.
2	**BigButton** – Set the start (A) and end points (B) for a *snippet* (a segment of an audio, generally 2, 3 or 4 seconds long) to be repeated in an endless loop. Click a third time (X) to exit the loop (page 4).	Enter the XXL Mode (page 65).
3	**Delete** – Delete the snippet that is currently being repeated.	Delete the snippet AND place the cursor three seconds *before* the deleted snippet (page 66).
4	**Next** – Go to the next snippet.	**Truncate snippets** – Truncate automatically 50, 100 or 200 milliseconds of each snippet (page 87).
5	**Last** – Go to the previous snippet.	**Fast Forward** – Exit the snippet loop and place the cursor two seconds before the end of the snippet (page 88).
6	**Repeat mode** – Enter the autopilot 'Repeat mode' (page 76).	Define the number of loops (page 79).

	Function	
	Single-click	Long-click
7	**Continuous repeat mode** – At the end of an audio Ear^{2}Memory plays the subsequent track (page 76).	Switch background color (page 64).
8	**Shuffle (random) mode** – Play the snippets of a single audio file in random order (page 92).	Define the number of loops (page 92).
9	**Delete all** – Delete all snippets of the current audio file (page 71).	Enter and exit the 'Edit snippet' mode (72).
10	**Setting** – Snippet management, playback speed, smart pause coefficient (93).	
Star	Favorite/Unfavorite a snippet (page 99).	Enter the 'Favorite mode' (page 99).
A	Play previous audio.	Activate/Deactivate smart pauses (page 80).
B	Rewind 3 seconds.	Open the 'Smart pause coefficient' menu (page 85).
C	Play/Pause	Open the 'Backup snippets' screen (page 69).
D	Forward 3 seconds.	Open the Speed menu (page 68).
E	Play next audio.	Open the (fixed) 'Pause length' menu (page 80).

17.2 XXL Mode
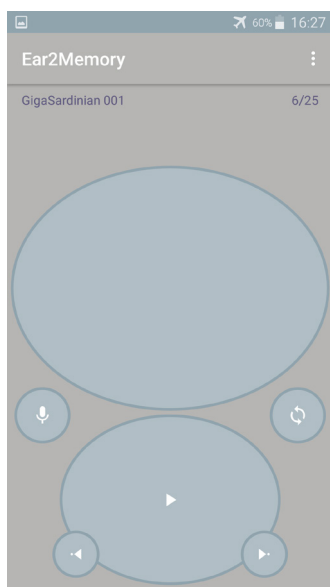
Figure 17.2 –Ear^{2}Memory's XXL mode.
Long-click the Play/Pause button to return to the Standard mode.

Table 17.2 – XXL mode functions

Function Single-click	Long-click
Giant XXL button – Next snippet (page 65)	Previous snippet
Play/Pause – Play & Pause.	Return to the Standard mode.
Microphone – Switch to Microphone mode (symbol turns orange; see page 90). Click again to turn the microphone off (symbol turns white again).	
Smart Pause – Activate/Deactivate smart pauses (symbol turns orange/white; see page 82)	
Previous audio	
Next audio	

17.3 New in Ear^{2}Memory 3.0

Ear^{2}Memory 3.0 introduced major advances:

1. Multifunctional XXL Button (page 65)
2. Voice recorder (90)
3. Speed control (68)
4. Smart and fixed pauses between repeats of a snippet (80)
5. Favorite snippets (mark & play; page 99)
6. Confortable snippet management: backup, restore, import, delete (93)
7. Playing audio subsets (74)

Minor changes include:

1. Dark mode useful in bright and night settings (beach etc.; page 64)
2. Truncating the final milliseconds (50, 100, 200, etc.) when recording snippets (page 87)

Appendices

18. Appendix: Law of second language acquisition

I report here my personal 200-hour *Ear²Memory* experience suggesting that there might be an as-yet-undescribed law in second-language acquisition. The preliminary definition: 'In second language acquisition, the time needed to understand a 40-minute audio file (word by word, without reading the transcript) is language-independent.' In other words, whether you learn a language related to your mother language (for example Italians learning Spanish, Germans learning Dutch) or a language that is totally different (Europeans learning Chinese, Japanese or Hindi), it will take you roughly the same amount of time to understand the first 40 audio minutes word for word. This statement is utterly counter-intuitive. One would normally assume that audios from related languages are easier to learn than those from non-related languages. So did I until May 2016.

In 2014, I studied a 280-page Norwegian manual from the '*mit System*' series ('Norwegian systematically') by the German Langenscheidt publishing house. After 2 months and about 60 hours of listening and reading I understood the 40 minutes of the audio files word for word. This experience was unremarkable – after all, Norwegian has many similarities with German and English, two languages I am familiar with.

In March 2016, I started the Greek manual from the same '*mit System*' series. Never before had I studied Greek

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(neither ancient nor modern), visited Greece of had Greek friends. After around two months and 60 hours of listening and reading, again I understood every single word of the audio files. This was surprising as I had expected Greek to take considerably longer to enter my brain than the more familiar Norwegian. Could the time needed for spoken language to enter a human brain be a more or less constant value, independent of the language we learn?

To confirm or reject this hypothesis, I started in May 2016 a third language I had not been exposed to in the past: Russian. Again, after two months and around 60 hours, I understood the audio files word for word (see Figure 17.1).

Was that enough proof for the existence of a 'Kamps' law of second language acquisition'? Or did the common Indo-European ancestry of Norwegian, Greek and Russian act as a previously unknown 'Indo-European language absorption facilitator'? So in September 2016 I started my fourth '*mit System*' manual: Turkish (again, no previous experience with Turkish, no language course, no trip to Turkey, no Turkish friends). The result: I needed 55 hours of ristening over a 2-month period to understand it all (Figure 17.2).

Russian, 30 days

		Minutes per unit (total)																	
Total (hours)	41,0	74	100	148	212	183	208	184	186	162	137	154	138	97	115	91	102	64	106
		Unit (minutes per day)																	
Day	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	20	20																	
2	30		30																
3	40	10		30															
4	122		10	42	70														
5	175	20	25	20	45	65													
6	124	2	2		25	35	60												
7	65							65											
8	125				10	10	20	15	70										
9	108	2	3	12	12	12	12	15	15	25									
10	45									20	25								
11	0																		
12	95								20	20	30	25							
13	75										15	20	40						
14	30													30					
15	75														75				
16	55															55			
17	67														15	12	40		
18	59												25	14				20	
19	90											15						15	60
20	82	10	10	10		30											22		
21	106	5	5	16	15		17										15	15	18
22	135		5	10	10			30	30	30	20								
23	63	3	5									35	20						
24	30			5	10									15					
25	179				10	8	33	20	20	33	20	25	10						
26	77				5	5							10	15	15	12	15		
27	82					13	18	23	14										14
28	100	2	5	3						18	12	19	18	13	10				
29	84					5	23	6								12	10	14	14
30	123					25	10	17	16	15	15	15	10						

Figure 17.1 – **First 30 days of learning Russian**. I had no previous experience of Russian: no language course, no trip to Russia. The total audio time of the manual was 43 minutes (Russisch mit System, Langenscheidt 2015, 18 lessons). My daily average of *Ristening* was one hour and 22 minutes. The 'discoveries' of the 'first islands of total understanding' are marked in blue.

So in my personal ristening experiments with 'virgin' languages, the time until reaching complete understanding (word for word, eyes closed, without reading the text, around 40 audio minutes of a standard language manual) seemed to be language-independent.

Many of my friends generously credit me with an extraordinary skill for learning languages. I know that they are wrong because they have no idea of the amount of time I have invested in language learning, probably ten

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times more than they did and certainly a hundred times more than people who claim to be totally unfit for learning a foreign language. I am convinced that virtually all of them could reproduce my results, with only one single condition: that they study for the time that is needed.

Turkish, 20 days

	Minutes per unit (total)														
Total (hours) 30,7	64	100	120	124	141	117	83	128	158	149	135	164	115	156	89

		Unit (minutes per day)														
Day	**Total**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	68	34	34													
2	62	8	14	40												
3	129	10	12	17	50	40										
4	146		12	15	24	25	40	30								
5	136			9	10	17	25	15	40	20						
6	151			6	12	14	10	22	47	40						
7	50										20	30				
8	134		7	7	4	8	9	5	15	24	20	15	20			
9	25												25			
10	285	6	8	7	6	13	12	11	23	33	33	46	20	34	33	
11	135												40	31	37	27
12	95	3	10											22	28	32
13	56	3		7							10	17	19			
14	66			5	8	8	6	11	13					15		
15	47													15	15	17
16	37											13	24			
17	30		3						7	10	10					
18	14														14	
19	73			5	12							14	16	13		13
20	104			13	7	18	9	6	10	11	16				14	

Figure 17.2 – **First 20 days of learning Turkish**. No previous experience of Turkish: no language course, no trip to Turkey, no Turkish friends. The total audio time of the manual (Türkisch mit System, Langenscheidt 2012, 15 lessons) was 37 minutes. My daily average of ristening was one hour and 32 minutes.

I am also convinced that any human being can rapidly learn the basics of any language – our brain is hardwired to do just that, as we nicely showed when we were babies. Moreover, we all learned languages in comparable time periods. So put enough power into the game (translate: increase the time of exposure), use simultaneously headphones to stimulate your ears (+ the auditory brain

cortex behind it) and books to stimulate your eyes (+ the visual brain cortex), and any brain will ultimately surrender to the assault of language.

Does that mean that most humans (>80%) would have virtually equivalent basic linguistic skills (± 20%)? I would be inclined to say so. If this were the case, one student would need 60 hours to understand a 40-minute audio of a totally new language; a less fortunate friend would have to study a little longer, some 70 hours; while the luckier ones would do it in about 50 hours. With that, of course, everyone would be happy (see paragraph 'Differences in Study Time', page 28).

More experiments are currently under way. In the meantime, if there is a language you have always craved to understand and speak but never dared to attack, this might be the moment! Give it a try! Allocate 50 to 100 hours of time, buy a suitable manual (see page 45) and do daily ristening with *Ear²Memory* for the next two to four months. I would be delighted to hear about your experience.

P.S. from 30 September 2018:

Since writing the preceding paragraphs, I confirmed my findings with Japanese, Chinese and Swahili. ☺

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19. Appendix: '...mit System'

The Langenscheidt 'mit System' manuals (see page 45) offer the perfect mix for efficient *Ear²Memory* learning (**A**udio + **T**ranscription [= Text] + **T**ranslation + **W**ord lists).

At a conference in Madrid ⊙1/2,3

Bob	Hello. You must be Tina Berger from Germany.
Tina	Yes, that's right.
Bob	Nice to meet you. I'm Bob Walker from the London office.
Tina	Oh yes. Hello.
Bob	Let me introduce you to the rest of the team. This is Juan Vargas from the US office. He's from Texas, but his office is in Florida.
Juan	Hi. Nice to meet you.
Tina	And you, Juan.
Bob	Juan's boss is in New York, she's not here at the conference. And this is Sonia Walker. She's from the Toronto office. Her area is Canada.
Sonia	Hi.
Tina	So you're both Walkers. Are you related?
Sonia	No, we're not related.
Bob	Just colleagues.
Sonia	Not good friends, Bob?
Bob	Friends, too ...
Sonia	Thanks, Bob.
Bob	... sometimes. Sonia and Juan are our two agents in North America. Their area is very big, but they're very good. They're experts ...
Juan	Thanks for those compliments, Bob.
Bob	... sometimes.
Juan	Hey!
Sonia	Your English is very good, Tina.
Tina	Well, my mother is English.
Sonia	Oh right.
Tina	Yes. My mother's English and my father's German.
Sonia	I see. Well, welcome to the team.
Tina	Thanks.

Figure 19.1 (previous page) – **ATTW package** (**A**udio + **T**anscription [= Text] + **T**ranslation + **W**ord lists): **Text**. From Englisch mit System, Langenscheidt 2015, 352 pages. Reproduced with permission.

1 Auf einer Tagung in Madrid

Bob Hallo. Sie müssen Tina Berger aus Deutschland sein.

Tina Ja, das ist richtig.

Bob Nett Sie kennenzulernen. Ich bin Bob Walker vom Londoner Büro.

Tina Ach ja. Hallo.

Bob Ich mache Sie mit dem Rest der Mannschaft bekannt. Das ist Juan Vargas vom US-Büro. Er ist aus Texas, aber sein Büro ist in Florida.

Juan Hi. Nett Sie kennenzulernen.

Tina Und Sie, Juan.

Bob Juans Chefin ist in New York, sie ist nicht hier auf der Tagung. Und das ist Sonia Walker. Sie ist vom Büro in Toronto. Ihr Gebiet ist Kanada.

Sonia Hi.

Tina Sie heißen also beide Walker. Sind Sie verwandt?

Sonia Nein, wir sind nicht verwandt.

Bob Nur Kollegen.

Sonia Nicht gute Freunde, Bob?

Bob Freunde auch ...

Sonia Danke, Bob.

Bob ... manchmal. Sonia und Juan sind unsere zwei Vertreter in Nordamerika. Ihr Gebiet ist sehr groß, aber sie sind sehr gut. Sie sind Experten ...

Juan Danke für diese Komplimente, **Bob**.

Bob ... manchmal.

Juan He!

Sonia Ihr Englisch ist sehr gut, Tina.

Tina Nun, meine Mutter ist Engländerin.

Sonia Ach so.

Tina Ja. Meine Mutter ist Engländerin und mein Vater ist Deutscher.

Sonia Ich verstehe. Nun, willkommen in der Mannschaft.

Tina Danke.

Figure 19.2 – **ATTW package** (**A**udio + **T**anscription [= Text] + **T**ranslation + **W**ord lists): **Translation**. From Englisch mit System, Langenscheidt 2015, 352 pages. Reproduced with permission.

Dialog	
at [æt]	*an, auf*
conference ['kɒnfrəns]	*Tagung*
hello [hə'ləʊ]	*guten Tag, hallo*
must [mʌst]	*müssen*
be [biː]	*sein*
Germany ['dʒɜːməni]	*Deutschland*
yes [jes]	*ja*
that [ðæt]	*das, jene(r, s)*
right [raɪt]	*richtig*
that's right [ˌðæts 'raɪt]	*das ist richtig, das stimmt*
nice [naɪs]	*nett, schön*
to [tə]	*zu*
meet [miːt]	*kennenlernen, treffen*
you [juː]	*du, dich, dir, Sie, Ihnen, ihr, euch*
nice to meet you [ˌnaɪs tə 'miːt ju]	*nett Sie / dich kennenzulernen*
I'm (I am) [aɪm]	*ich bin*
office ['ɒfɪs]	*Büro*
oh [əʊ]	*ach, oh*
let [let]	*lassen*
me [miː]	*mich, mir*
Let me introduce you to ... [ˌlet mɪ ˌɪntrə'djuːs juː tʊ]	*Ich mache Sie mit ... bekannt*
rest [rest]	*Rest*
of [ɒv]	*von*
US [ˌjuː'es]	*US-, amerikanisch(e)*
he's (he is) [hiːz]	*er ist*
his [hɪz]	*sein(e)*
hi [haɪ]	*hi, hallo*
boss [bɒs]	*Chef(in)*
she [ʃiː]	*sie*
here [hɪə]	*hier*
her [hɜː]	*ihr(e)*
area ['eərɪə]	*Gebiet*
Canada ['kænədə]	*Kanada*
both [bəʊθ]	*beide*
related [rɪ'leɪtɪd]	*verwandt*
we [wiː]	*wir*
we're (we are) [wɪə]	*wir sind*
not [nɒt]	*nicht*
just [dʒʌst]	*nur, einfach, gerade*
colleague ['kɒliːg]	*Kollege, Kollegin*
good [gʊd]	*gut*
friend [frend]	*Freund(in)*
thanks [θæŋks]	*danke*
our ['aʊə]	*unser(e)*
agent ['eɪdʒənt]	*Vertreter(in)*
North America [ˌnɔːθ ə'merɪkə]	*Nordamerika*
their *Pl* [ðeə]	*ihr(e)*
very ['veri]	*sehr*
big [bɪg]	*groß*
they're (they are) [ðeɪə]	*sie sind*
expert ['ekspɜːt]	*Experte, Expertin*
those *Pl* [ðəʊz]	*jene*
compliment ['kɒmplɪmənt]	*Kompliment*
Hey! [heɪ]	*He! Hallo!*
your [jʊə]	*dein(e), Ihr(e), euer(e)*
Well, ... [wel]	*Nun, ...*
my [maɪ]	*mein(e)*
mother ['mʌðə]	*Mutter*
oh right [ˌəʊ 'raɪt]	*ach so*
father ['fɑːðə]	*Vater*
I see [ˌaɪ'siː]	*hier: ich verstehe*
welcome to ... ['welkəm tʊ]	*willkommen in / bei ...*

Figure 19.3 – **ATTW package** (**A**udio + **T**anscription [= **T**ext] + **T**ranslation + **W**ord lists): **Word list**. From Englisch mit System, Langenscheidt 2015, 352 pages. Reproduced with permission.

Glossar

A

@ ['æt] @ 2
a [ə] ein(e) 1
a bit [ə 'bɪt] etwas, ein bisschen 10
a few [ə 'fjuː] ein paar 9
a little [ə 'lɪtl] ein wenig, etwas 2, 9
a little something [ə lɪtl 'sʌmθɪŋ]
eine Kleinigkeit, etwas Kleines 12
a long way [ə ˌlɒŋ 'weɪ] weit;
ein weiter Weg 10
a lot (of) [ə 'lɒt (əv)] viel(e) 3
a week [ə 'wiːk] die / pro Woche 4
a.m. [eɪ 'em] vormittags (Uhrzeit) 4
ability [ə'bɪləti] Fähigkeit 13
about [ə'baʊt] etwa, ungefähr 3
above [ə'bʌv] über 8
abroad [ə'brɔːd] ins / im Ausland 6
accent ['æksnt] Akzent 17
accident ['æksɪdənt] Unfall 11
accident occurence ['æksɪdənt əˌkʌrəns]
Unfallhergang 11
accommodation [əˌkɒmə'deɪʃn]
Unterkunft, Unterkünfte 6
across [ə'krɒs] quer durch, überall in 15
act [ækt] (schau)spielen 4
act as ... ['ækt æz] als ... tätig sein 13
activity [æk'tɪvəti] Aktivität, Tätigkeit 15
actor ['æktə] Schauspieler 4
actually Adv ['æktʃʊəli] eigentlich, wirklich,
tatsächlich 7
add [æd] hinzufügen 20
address [ə'dres] Adresse 2
Adirondacks [ˌædɪ'rɒndæks]
Adirondack-Berge 16
admit [əd'mɪt] zugeben 10
adult ['ædʌlt] Erwachsene(r) 16
adventure [əd'ventʃə] Abenteuer 6
adventure holidays [əd'ventʃə hɒlɪdeɪz]
Abenteuerurlaub 13
advertisement [əd'vɜːtɪsmənt] Anzeige,
Annonce 13
advice [əd'vaɪs] Rat(schlag), Ratschläge 15
aerobics [eə'rəʊbɪks] Aerobic 5
Africa ['æfrɪkə] Afrika 6
after ['ɑːftə] nach 3
afternoon [ˌɑːftə'nuːn] Nachmittag 4
afterwards ['ɑːftəwədz] hinterher 14
again [ə'gen] wieder, noch einmal 2
against [ə'genst] gegen 11
age [eɪdʒ] Alter 2
age group ['eɪdʒ gruːp] Altersgruppe 13

agency ['eɪdʒnsi] Agentur 17
agent ['eɪdʒnt] Vertreter(in) 1
ago [ə'gəʊ] vor 6
agree [ə'griː] vereinbaren, beschließen;
übereinstimmen, sich einigen 14
ahead [ə'hed] vorn, vorwärts, voraus 13
airbag ['eəbæg] Airbag 1
airport ['eəpɔːt] Flughafen 1
alarm [ə'lɑːm] Alarm(anlage) 15
alarm clock [ə'lɑːm klɒk] Wecker 17
alcohol ['ælkəhɒl] Alkohol 9
alert Adj [ə'lɜːt] wachsam 14
alert V [ə'lɜːt] alarmieren 20
alive [ə'laɪv] lebendig 18
all [ɔːl] alle 1
all ... [ɔːl] den / die / das ganze(n) ...
(lang / über) [zeitl.] 1
all day [ɔːl 'deɪ] den ganzen Tag 5
all in one word [ɔːl ɪn wʌn 'wɜːd] zusammen-
geschrieben, (alles) in einem Wort 2
all right [ɔːl 'raɪt] gut, in Ordnung 9
All the (very) best. [ˌɔːl ðə (veri) 'best]
Alles (alles) Gute! 12
all the time [ˌɔːl ðə 'taɪm]
die ganze Zeit 6, 13
all wrong [ɔːl 'rɒŋ] ganz falsch 6
almost ['ɔːlməʊst] fast, beinahe 17
along [ə'lɒŋ] entlang 3
already [ɔːl'redi] bereits, schon 12
also ['ɔːlsəʊ] auch 5
although [ɔːl'ðəʊ] obwohl 17
always ['ɔːlweɪz] immer 4
amazing [ə'meɪzɪŋ] erstaunlich 17
ambulance ['æmbjʊləns] Krankenwagen 11
America [ə'merɪkə] Amerika 1
American [ə'merɪkən] amerikanisch;
Amerikaner(in) 1
an [ən] ein(e) 1
an hour and a half [ən aʊə ənd ə ˌhɑːf]
eineinhalb Stunden 8
an hour late [ən aʊə 'leɪt] mit einer Stunde
Verspätung 6
and [ænd/ənd] und 1
And the same to you. [ənd ðə ˌseɪm tʊ 'juː]
Gleichfalls. 12
ankle ['æŋkl] Knöchel 11
anniversary [ænɪ'vɜːsri] Jahrestag 12
announcement [ə'naʊnsmənt] Ansage,
Ankündigung 17
another [ə'nʌðə] noch ein(e),
schon wieder ein(e) 3

Figure 19.4 – **Glossary**. From Englisch mit System, Langenscheidt 2015, 352 pages. Reproduced with permission.

20. Appendix: Privacy Policy

Ear²Memory is a multi-purpose application for learning languages. Other uses include the rehearsal of oral presentations (poems at school, shows at colleges, scientific demonstrations at conferences, etc.); dancing and tai-chi; and learning the vocal or instrumental part of a song.

In order to run properly, the app requests the following privacy-relevant Android permissions:

20.1 Read/Write External Storage

- Open audio files;
- Create the folder 'Ear2Memory' and store a sample MP3 audio file;
- Backup and restore the edit points for the audio files ('snippets').

20.2 Record Audio

Record a temporary MP3 audio file to check the correct pronunciation of words/sentences or a musical performance.

Ear²Memory does NOT collect or send data to the developers of the app or any third party.

Notes

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Bernd Sebastian Kamps

Ear²Memory {3.0}

*To really learn languages
on your smartphone!*

What is Ear2Memory?

E2M is a free smartphone app that will help you learn any language in the world. E2M will enable you, within a few months, to clearly distinguish and understand, word for word, one hour of foreign speech (you'll "conquer an island of total understanding").

In the process, you will

- Learn your first 1000 words
- Have excellent spelling skills
- Develop an intuitive comprehension of important grammar rules
- Acquire a fairly genuine accent
- Learn a robust method via which you will be able to learn even more languages in the future (because you know how good it is; that the time you need is quantifiable; that success is quickly visible, etc.)

As progress in language learning is a direct function of time, be prepared to dedicate at least 30 minutes a day, five days a week.

E2M will help you keep your motivation high.