

# The virtual language teacher

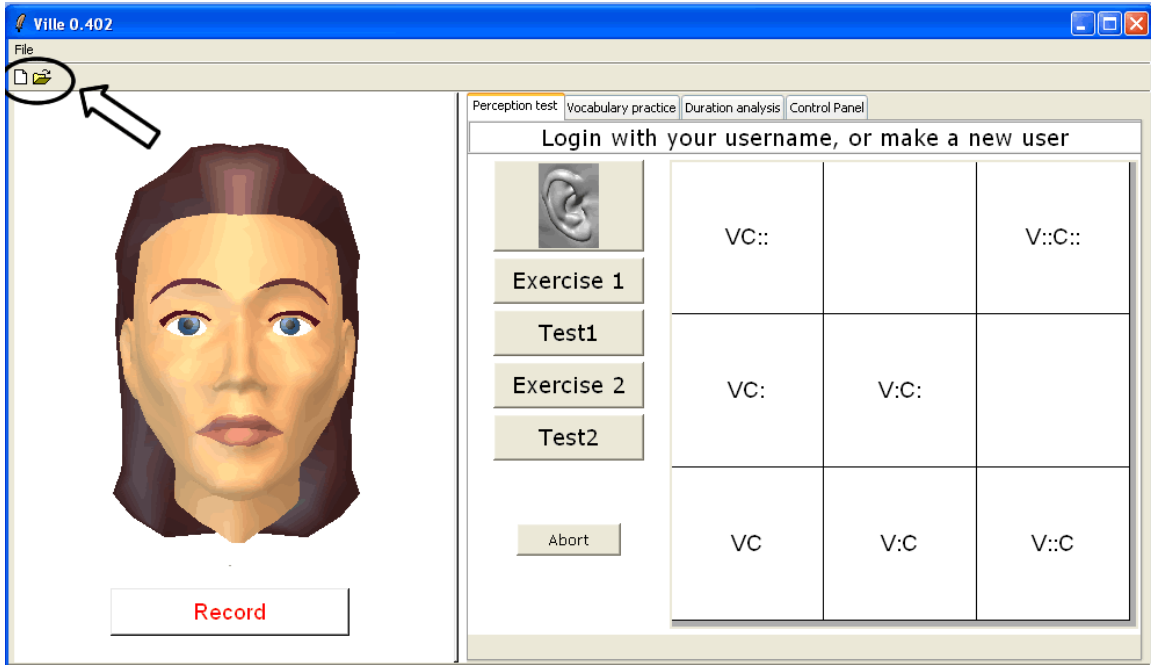
Teaching Estonian Duration

## Hands-on Instructions

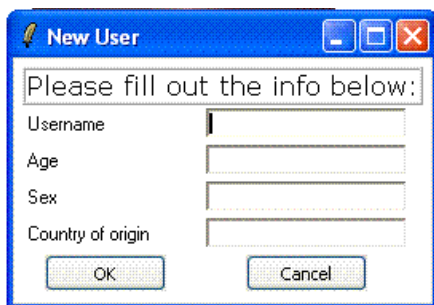


Welcome to the hands-on instructions for the virtual language tutor on Estonian duration. Since you are among the first people ever to do these exercises, it is difficult to estimate how much time every exercise will take. Below follows an introduction to the program and its features, and suggestions on how to proceed through the exercises. The comments fields are primarily thought of as personal notes for a plenary discussion, or as feedback to the researchers working on the virtual teacher project.

1. Create a new user file (or open an existing one).



Picture 1: The white paper opens the new-user dialog, and the yellow folder to its right opens a dialog to select an existing user file.



A directory named as your username will be created.  
Recordings you make, and a log file of your actions will be stored in this directory.

## Perception Exercises

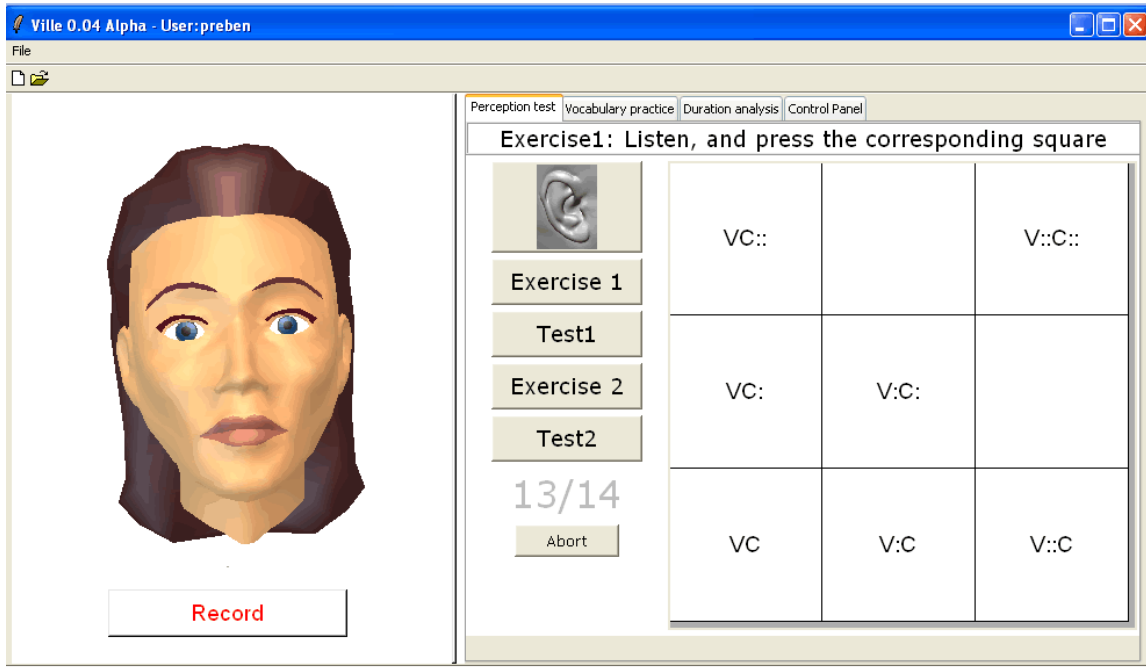
In Estonian, a distinction is made between short, long, and over-long vowels and consonants. In addition, these can be freely combined. Out of the nine combinations possible, seven of them are used in the Estonian language.

The first exercise is to learn to perceive the difference between these seven 'states'

The phonotax used is:

V = short vowel V: = long vowel V:: = overlong vowel

C = short consonant C: = long consonant C:: = overlong consonant



## Get familiar with Estonian duration

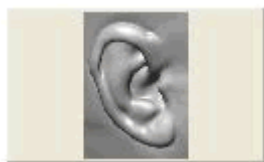
### 1. Click on the map

The sound 'sate' can be pronounced in seven different ways to create seven distinct words. Click on the square in the grid to listen to the variation.

### 2. Exercise1

Once you have familiarized yourself with the map, press the 'Exercise 1' button.

The teacher will say the different forms of 'sate' in randomized order twice, and your task is to press the correct corresponding picture in the grid when you hear a sound. The teacher will tell you if you pressed the right square or not. If you want to hear a word again, you can press the ear-button (or the space-button on your keyboard).



**3. Test1**

Once you are done with Exercise1, Press the ‘Test1’ button.

As in the exercise above, the teacher will say the different forms of ‘sate’ in randomized order twice, and your task is to press the correct corresponding square. This time you only get one chance to get it right on each utterance, and there is no feedback on wether you pressed the correct button or not.

How did it go? Comments:

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**4. Exercise2**

Same as Exercise1, but this time other words are used. You must now learn to generalize the skills you have learned in Exercice1 and Test1.

Comments?

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**5. Test2**

same as Test1, but the words used are the same as in Exercise2.

Comments?

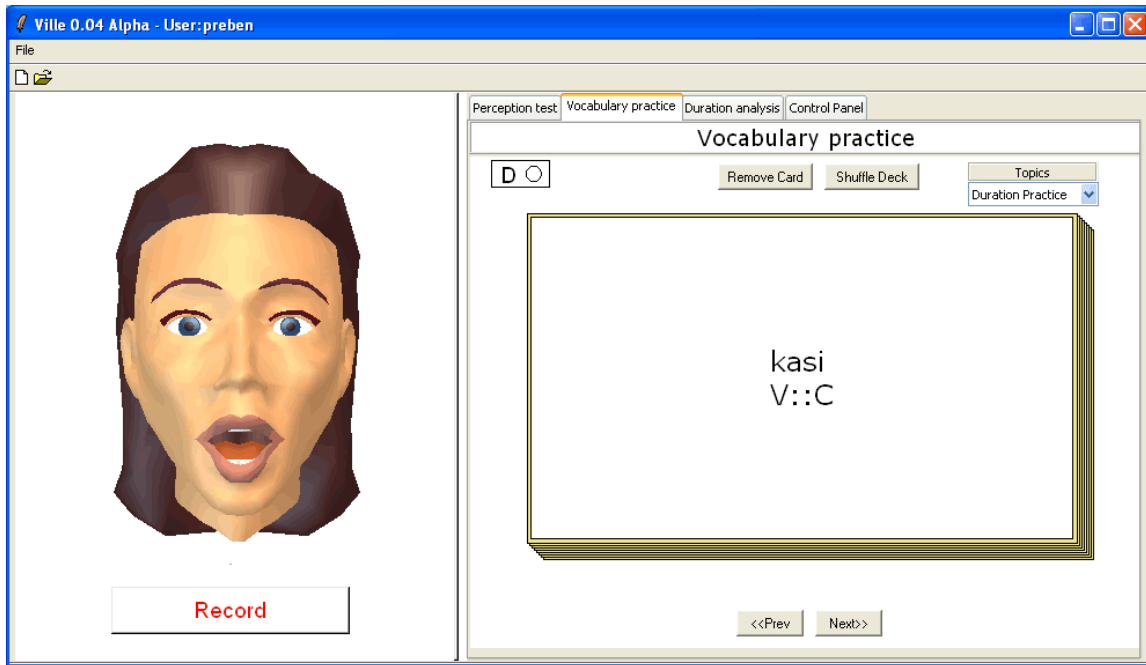
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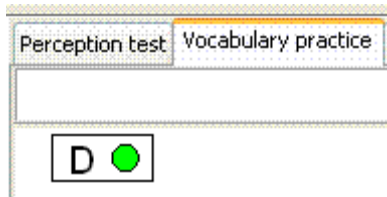
## Production Exercises

The vocabulary-practice pane emulates a deck of cards. Click on the top card, or use the space-button on your keyboard, to hear the sound it represents. Use the Prev and Next buttons, or the left and right arrows on your keyboard, to change card.



### 1. Mimick

Try first to listen to the word pronounced by the virtual teacher, and then to mimick what you hear. When you feel ready, press the record button to make a recording of your utterance. The exercise is to try to mimick the duration of the utterance as closely as possible, with special attention on the first vowel and the following consonant. If your duration matches within a certain threshold, the circle next to the 'D' in the top left corner of the pane will turn green. If the duration is above or below the threshold, it will turn red.

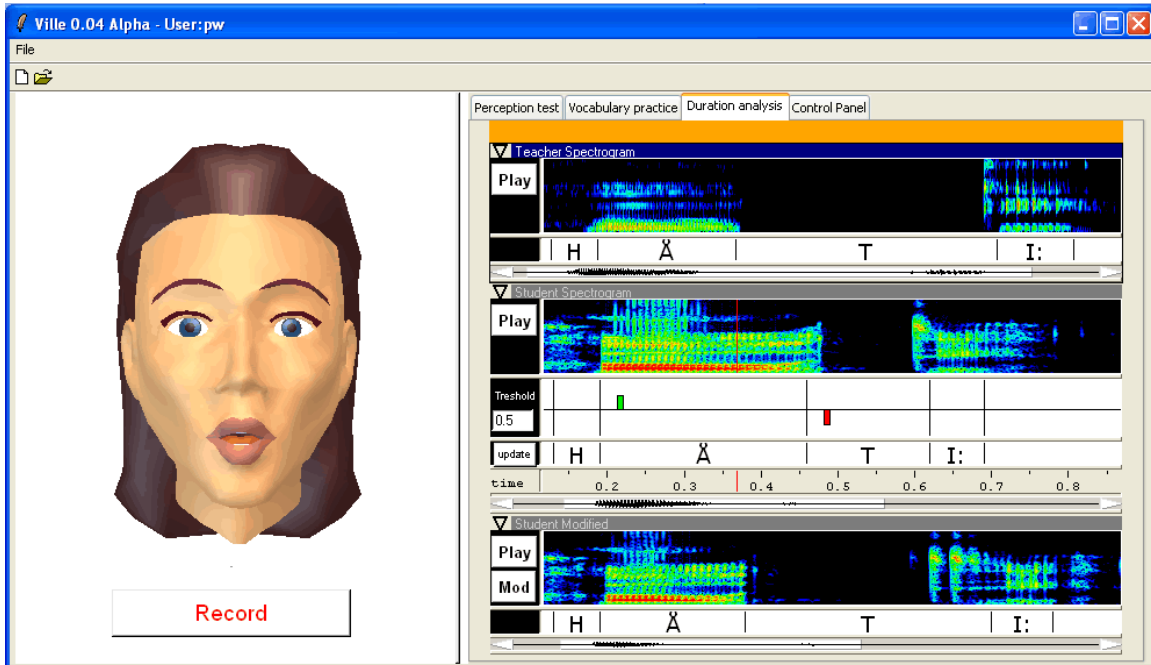


Picture 3: The circle next to the 'D' in the top left corner of the pane will turn green or red depending on your performance.

If you click in the 'D' square you will go to the duration-analysis pane.

## Duration Analysis

In the duration analysis pane, a spectrogram and a time alignment is shown, both of the teachers utterance and of your utterance. The top part of the pane displays the teachers recording, with the duration of each phone marked. The middle part is the student (your) recording where there is, in addition to the spectrogram and the phone borders, a pane displaying the offset ratio between the students and the teachers duration on each particular phone. A rectangle upwards indicates that the students duration was longer than the teachers on that particula phone, and downwards means shorter



Picture 4: The duration-analysis pane.

The lower part of the pane offers the possibility to create a modified version of the student recording, where the phones in focus are stretched to match the teachers duration. The modified student recording will appear if you press the 'Mod' button.

### 2. Experiment with your own voice.

Try to match the teachers duration as close as possible. Reduce the threshold setting to the left of the student pane (2) if you want to increase the level of difficulty.

Comments:

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### **3. Production without listening to the teacher**

Do the same exercise as above, but this time do not listen to the teachers recording.

Try to get the right duration from looking at the word and corresponding VC symbols, and try your internalized understanding.

Comments:

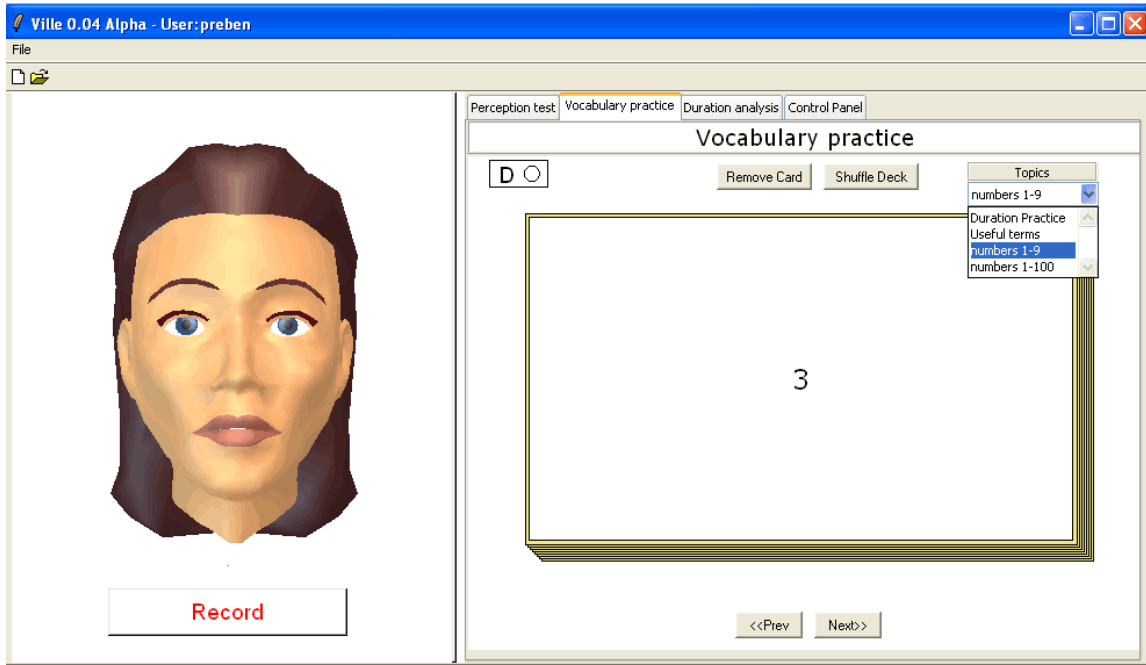
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## Vocabulary Exercises - Flashcards

Once you are done with the duration exercises, use the flashcards to learn some Estonian vocabulary.



Flashcards made of paper with L1 on one side and L2 on the other, is a well known tool for learning new vocabulary. The novel thing in this application is that they contain a recording rather than a text on the other side.

A good place to start can be by learning the numbers 1-9.

1. Select the 'numbers1-9' deck of cards from the topics combo-box.

The numbers are now ordered and you may go through them, by clicking and listening, to get familiar with how they are pronounced in Estonian. Try to see if you can say the word correctly before listening to the teacher.

2. Next step is to randomize the order of the cards, by pressing the 'Shuffle Deck' button. This forces you to remember in a different way than if the cards are always presented in the same order.

3. Remove the cards you have memorized from the deck, by pressing the 'Remove Card' button. This way you are able to focus on the words you find more difficult to remember.

4. Go through all the cards in this manner until the deck is empty, then reload the deck to test your memory.

5. Do the same with the 'numbers1-100' deck of cards. Make your own combinations.  
Your age etc. –

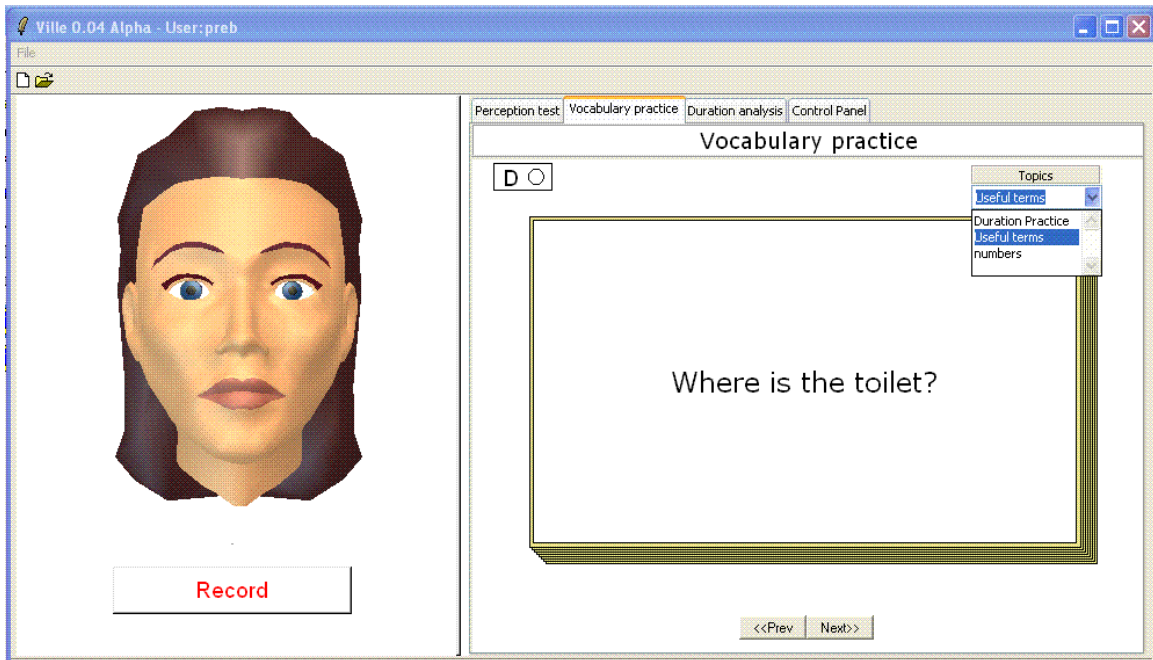
6. Test your new skills with a friend. Say a number and have your friend say it in English.  
Take turns. Comments:

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## Useful Terms



1. Combine your knowledge of numbers in Estonian with with learning some of the terms in the 'useful terms' deck of cards.
2. Try at least one of the terms with an Estonian person tonight in the restaurant, or during a social event.
  - And don't forget to have fun!
  - Good Luck!

Comments

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