

Tips for writing using speech recognition with *SpeakQ*

Listed below are some strategies for getting the best results when using *SpeakQ*. Some of these points may be relevant to other continuous speech recognition programs, but several are unique to the features of *SpeakQ*. You can find some of these points in the *SpeakQ* Help file, but you should review this page before you begin using the program or if you are supporting someone else who is learning to use the program.

1. **Complete the speech recognition training.** This is critical to get the best results with speech recognition. We cover this topic in another online document and in the *SpeakQ* Help file.
2. **Choose the best speech recognition option for your use.** *SpeakQ* offers two options for dictation: (1) *Speak and Select*, and (2) *Speak Continuously*.

In the *Speak and Select* mode, the dictated word(s) do not appear directly in the document, but in the word choice box. You can look at the recognition choices offered and listen to them with text-to-speech before selecting one. *Speak and Select* offers a much more supported environment for dictating and is a good place to start in a couple of situations: if you are unfamiliar with speech recognition, or if you are helping a writer who is younger or has greater difficulty with literacy. This mode supports a slower dictation style and dictating in shorter language segments. In addition, you have the ability to review and confirm the recognized words *before entering them into the document*. You may find this mode offers the greatest support for writing through dictation.

In the *Speak Continuously* mode, the software operates more like standard speech recognition software—i.e., you speak and the recognized words appear directly in the document. This can be disconcerting for less experienced writers or those who struggle with literacy. However, since *Speak Continuously* is integrated with word prediction and text-to-speech, even this mode still offers unique supports for reviewing text and correcting recognition errors.

You can easily try each of these dictation modes by choosing them in the Speech Recognition menu in *SpeakQ* to see which one works best for you. You can also find more information about these two modes in the *SpeakQ* Help file.

3. **Do not speak as if you are having a conversation with the computer.** Since you are speaking to write on the computer, this may lead you to try to talk to the computer as if you were speaking to another person. In conversation, the listener “fills in” any gaps in understanding when the speaker speaks indistinctly, mispronounces words, changes direction in mid-utterance, and so forth. Unfortunately, continuous speech recognition software is not yet as clever as having a live partner, and the software has to hear every word distinctly.
4. **Enunciate words clearly.** This strategy grows out of the point above and may be the most important one of all. Longer words such as “arithmetic” and “butterfly” are distinct enough

that they will usually be recognized correctly. But, shorter words can cause problems. For example, if you dictate the word "and" indistinctly, the software may very well hear "an," "in," or some other short word. There can also be a significant problem where the sound(s) from the end of one word gets attached to the beginning of the following word, thereby confusing the software. For example, "if you" might be recognized as "a few" unless the words are enunciated clearly.

The need to enunciate clearly is all the more important with continuous speech because the sounds at the beginnings and endings of words affect those in surrounding words. Such natural speech characteristics can be confusing for continuous speech software. Therefore, you have to get in the habit of articulating words quite clearly—that is, in a manner that may seem unnatural for actual conversation. The *Speak and Select* mode of *SpeakQ* readily supports dictating in this way.

5. **Dictate in short strings of words** such as clauses and phrases. This relates to the point above about enunciating more clearly. While you may be able to dictate an entire sentence without pausing, you might find that you get better recognition initially if you try to say fewer words at one time. The *Speak and Select* mode of *SpeakQ* is also particularly effective with this method. Saying single words can also be effective if the words are longer and more distinctive sounding. But, as we mentioned above, short, single words are easily confused by the software. For example, saying "a" as a single word will often trick the software into guessing similar sounding words (e.g., "hay," "eight," etc.). However, if you say short words as part of phrase or short clause (e.g., "I saw a horse," "with a new computer," etc.), it will be easier for the software to recognize.
6. **Think of dictating as "typing by voice."** If you think of typing as a means of text input, it may help you understand what is required to achieve better results with speech input. When you type, you have to follow certain rules. For example, you do not type incomplete words or insert meaningless words (like "um"). Also, if you hit the wrong keys while typing (e.g., instead of "tree," you mistakenly type the word "free"), the meaning of the sentence may be unclear or even ungrammatical, and the reader may be unable to interpret the meaning. However, mistakes happen in typing, and you have to correct these. By the same token, you have to correct speech recognition errors.
7. **Before you actually dictate to the computer, compose the next sentence in your head,** or possibly even aloud. You should only turn on the microphone when ready to dictate.
8. **Develop a dictation pace that allows you to attend to the points above.** You should speak somewhat more slowly than would be expected in conversation. Keep in mind that the model for dictation is different from normal conversation, and think about speaking phrases or clauses rather than entire sentences, in order to maintain an optimal pace of dictation. It may take many hours of practice during actual dictation for a writer to become completely comfortable with this style of dictation. Keeping each dictated "chunk" short will help with this. Again, the *Speak and Select* mode of *SpeakQ* readily supports dictating in this way.
9. **Take frequent breaks when dictating,** especially when first beginning. You should never

dictate for more than 30 minutes at a time (less when starting out) without taking a break for a drink of water, to get up and stretch, etc. Even though a person may be used to speaking for longer periods, dictation is in many ways more demanding than casual conversation. Continuous speech is a cognitively demanding activity that can leave a writer tired, tense, etc., and frequent breaks, even if brief, are critical. When using *SpeakQ*, you can take breaks from dictation by writing using only word prediction and text-to-speech.

10. **Preview and train any new content words or proper names** you plan on using in the writing session. Even though many of the words you need may be in the dictionary, you will find it helpful to “prime” the system with new vocabulary by seeing it written first and saying it aloud during training. This sort of preview can take place as part of a pre-writing activity, which is also helpful for understanding and using the concepts, etc. Preview words by simply dictating them in a list, or through a separate assignment such as a vocabulary activity such as writing definitions for key concepts, etc. In *SpeakQ*, the words you want to preview can be entered into a training file for dictating before writing (covered in a separate document and a *SpeakQ* help file).

Speech recognition can be fun?

In SpeakQ, speech recognition training can be fun!

You know how important it is to train a speech recognition program to recognize your voice. However, the training is one of the biggest drawbacks to using speech recognition for some people. With SpeakQ, the training is very different. The program has a special training module that really supports people who might otherwise have great difficulty with speech recognition training. In SpeakQ, you hear the words read by text to speech (TTS), see them highlighted as they are read, and then repeat them. As you say the words, they appear on the screen as if you were dictating them. If the training program doesn't recognize what you say, it will repeat the words as often as needed. (Be sure to read the Help File in SpeakQ to learn more about this.)

So how can the training in SpeakQ be fun? There are at least three ways.

First, you can put any text into the training module you want, so that when you are training you can read something you really like, even something you wrote yourself! The instructions for adding a text to the training files are located in the SpeakQ Help file, and they are also copied below.

Second, you can use the training as a pre-writing activity. You can put vocabulary words into a training file to review them before you need to use them in writing about a topic. This could just be a list of words or a set of words and their definitions. You can also add a summary of the material you will be writing about, or other kinds of prompts, to help with the writing. This summary could come from a chapter summary in a textbook, written by a teacher, or whatever source makes sense.

Third, you can use the training module with texts you have added yourself, simply as a prompted reading environment. Simply add a text that you want to read and load it through the SpeakQ training, and you will have an environment in which you will hear the words, see them highlighted as they are read, and then repeat them. It is a terrific support for learning, even if you are not planning on using speech recognition at all!

You will probably be able to think of other ways to take advantage of SpeakQ's excellent speech recognition training module to support use of speech recognition, writing, and learning through literacy.

Finally, any time you use the training module in SpeakQ in ANY way, it will improve the speech recognition file for your potential use if and when you decide to try to use it.

Don't forget: It is also important for you to learn HOW to talk to the program so that it has the best chance to recognize your voice.

Creating training texts

You can create your own training text files from samples of your own writing or from any other source. Training texts are simply text files, created in the word processor of your choice, using text characters only (i.e., no numbers) and simple punctuation. These are then saved in text-only format with a “.txt” extension.

1. Find or write your piece of text. Press **Enter** after each sentence to separate it from the next.
2. Break each sentence into ‘chunks’ (5 or 6 words per chunk is a good average but you can choose how many or how few you have).
3. Type out your text, inserting the # symbol after each chunk.

This is an example of how a training text file might look:

Introduction to Speech Recognition Please repeat what the computer says. Speak clearly in your normal voice. Do not talk too fast,# or too slowly. After you speak,# the computer will write down# what you have said. If you do not speak everything,# do not worry. The computer will speak# any remaining words again. This speech training# will help the computer# better recognize your voice.

4. Save your training text in a text-only format in a folder under ...**Program Files\WordQ2\Training**

Beginning sentences to use when learning to use *SpeakQ*

When you start using *SpeakQ* (or any speech recognition product) for writing, it is important that you have a chance to practice with simple dictation that does not require complex language or complicated topics. You don't want to have to formulate difficult ideas at the same time that you are learning a new method of writing and using new software. In other words, it is important that you focus on how to use *SpeakQ* and how to dictate so that the software can recognize your voice before exerting substantial mental effort in composing.

Below (or in the attached/linked document), we have given you a list of sample sentences that you can use for practice in dictating to *SpeakQ*. You can use these sentences as they are, add more of them, or completely make up your own to go with your interests. The sentences begin very simply, and get slightly longer to help you learn how to think about dictating longer sentences.

You can use these sentences below in at least three ways. One way to use them is to say each one aloud for the new *SpeakQ* user, and then have the person turn on the microphone (press the [F8] key) and repeat the sentence. If the program makes any recognition errors, you should correct them. We recommend that you repeat the sentences in short segments, but this is an opportunity to find out a comfortable method of dictation, so some experimentation is worthwhile.

Another way to use the sentences is to add them into the training files and run them through the training module. We have also included the sentences below with markings for adding them to a training file (see the *SpeakQ* training document). Of course, you should feel free to change the markings if you want to say the sentences differently. Once you have added them to a training file, you can then open the file through the training routine and say them.

Finally, you could combine these two methods. You could start by dictating them in the training module, and then dictate them into a document afterwards. This will ensure that *SpeakQ* gets even more training—the more you can complete, the better—and that you have a chance to experience actual dictation with the simple sentences.

For use as dictation

I am a student.

I like reading.

I like broccoli.

I like chocolate ice cream.

I like to watch soccer.

I like to go horseback riding.

I would like to be a schoolteacher.

In the winter, I like to go sledding.

When it's hot out, I like to go swimming.

My favorite ice cream flavor is peppermint.

Actually, my favorite flavor is strawberry.

I just finished reading a terrific book.

It is about the effects of global warming on hurricanes.

My favorite drink in the summer is lemonade.

Sometimes I like to write because it's fun to tell stories.

Sometimes I don't like to write because it is hard to decide what to say.

Broccoli is very good for me because of all its vitamins and minerals.

My favorite baseball team won eight games in a row and then lost twelve straight!

My grandparents are coming to visit us and we will be taking a trip to go camping in the mountains.

For inclusion in a training file

I am a student.

I like reading.

I like broccoli.

I like chocolate ice cream.

I like to watch soccer.

I like to go#horseback riding.

I would like#to be a schoolteacher.

In the winter,#I like to go sledding.

When it's hot out#I like to go swimming.

My favorite ice cream flavor#is peppermint.

Actually, my favorite flavor#is strawberry.

I just finished#reading a terrific book.

It is about the effects#of global warming#on hurricanes.

My favorite drink#in the summer#is lemonade.

Sometimes I like to write#because it's fun to tell stories.

Sometimes I don't like to write#because it is hard#to decide what to say.

Broccoli is very good for me#because of all its vitamins#and minerals.

My favorite baseball team#won eight games in a row#and then lost twelve straight!

My grandparents are coming#to visit us#and we will be taking a trip#to go camping#in the mountains.