

Using WordQ in the Classroom

WordQ 5 for MacOS


1. Basic Operation

Introduction

WordQ® is a simple-to-use writing tool that helps students create better quality writing with greater independence and confidence. It provides ongoing compensatory support for students with learning differences (e.g., dyslexia) or physical disabilities, and in general, any student who faces barriers to writing for any reason. As well, it can complement reading and writing instruction for students who are learning English or French as a second language. In this tutorial, we will be looking at how to use some of the WordQ features that are designed to help in these situations.

Initial Setup for Use

Run WordQ

Installation instructions for WordQ are provided separately. Once installed, you can doubleclick the WordQ desktop icon  to run WordQ or choose it from the Start Menu.

Create a New User Profile (Options>New User)

1. Choose Language/Vocabulary

WordQ offers three levels of English vocabulary with Canadian, US, or UK spelling: **Starter** (up to grade 3 level); **Intermediate** (grade 2 to 8), and **Advanced** (grade 7 and above). These vocabularies (5,000 – 15,000 words) represent words that are commonly used at these levels and are a subset of a larger background dictionary (80,000 words). Think of a vocabulary as words within your head that are most familiar. With word prediction, words are first suggested from your vocabulary, then from the background dictionary. Words from the background dictionary will added to your vocabulary once used. Misspelled or unique words are held for review and possible addition to your vocabulary. As you write, word frequency data is updated in your vocabulary so that words that you frequently use are suggested with higher likelihood.

2. Choose a Voice

WordQ includes high-quality Acapela text-to-speech voices and also supports those provided by the computer's operating system. Acapela voices permit synchronizing the speech feedback with word-by-word highlighting on the screen. Other voices may or may not. Choose a voice that makes sense for the dialect of English that you are using (e.g., American English, UK English, Australian English, etc.).

3. Save User Profile

The last step is to save the User Profile with a name such as the student's name. It is recommended to save this on the local computer. **If saving on a remote server such as OneDrive or iCloud, be aware that it may take longer to save.** When you quit WordQ,

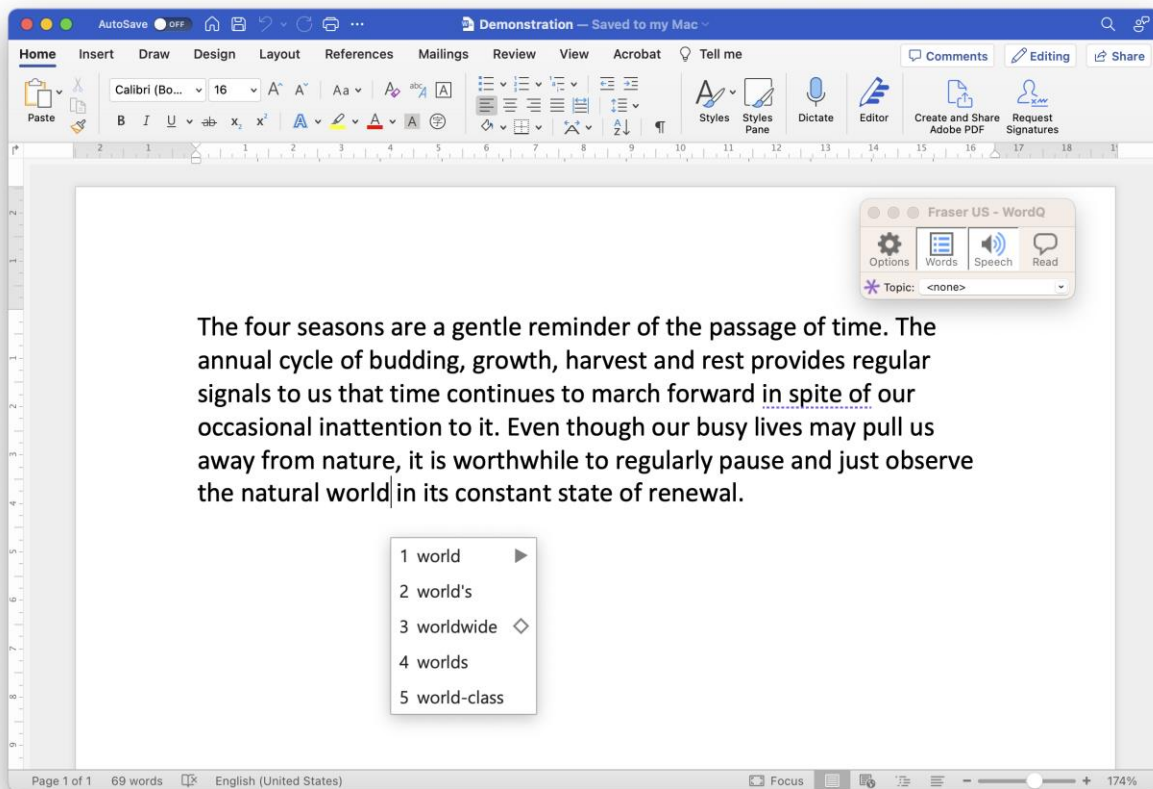
changes to your vocabulary are saved as long as you say “Yes” when asked if you want to save changes. Be sure to allow for time for data transfer.

Tips

- The average person may only use a couple of hundred unique words throughout the day.
- Approximately 3 billion words of text from a wide variety of public sources were used in the data analysis to create the word prediction. Given the public nature of this data, Quillsoft hand-checked the user vocabularies and the background dictionary to remove any profanities or biases.
- A modestly large background dictionary of 80,000 was hand-curated rather than an extremely large dictionary, say 500,000 words. Such a massive dictionary may be useful for playing Scrabble, but not for someone who has difficulty writing where a misspelling may exist as some obscure word.
- Over time, WordQ will match the unique word usage of the student because it is constantly learning how the student writes.
- When a new User Profile is created, the most common usability options are installed, and these can be personalized for unique student needs.
- A WordQ user can have multiple User Profiles, e.g., English and French.
- By default, WordQ loads the most recently used User Profile on startup. The user can switch between their existing User Profiles using the “Open User...” command in the Options menu.
- Each User Profile has a .wqv extension. You can always see the name of the current User Profile by looking at the title bar of the toolbar (see diagram on next page).


The WordQ Writing Environment


When running, WordQ adds two windows that “float” on top of the student’s text editor: a toolbar containing buttons and menus for controlling WordQ’s behaviour (top right corner of the image below) and a word prediction window that by default will follow along with the current insertion location in the text editor, offering predictions consistent with the text at the cursor position.







These floating windows offer the student assistance with converting their ideas into writing, in ways that we’ll look at in detail in the sections that follow. Please note that by design, WordQ does not write for the student or automatically fix their mistakes. They must still do their own writing, but using WordQ makes it easier for them to be more independent. We call this type of technology IA, or Intelligent Assistance, as opposed to AI. WordQ offers no criticism or pressure, so writing can be more enjoyable. The hope is that this type of support can reduce the likelihood of arguments at homework time because students know they can get their ideas into writing more easily and independently. Let’s talk about the specific ways WordQ is designed to help make that happen.

WordQ Toolbar Buttons

 **Options** displays a dropdown menu to customize your use of WordQ

 **Words:** Click to toggle whether predicted words are shown , or hidden

  **Speech:** Click to toggle whether speech feedback is on , or off 

  **Read:** Click to turn proofreading mode on , or off 

Topics allow you to emphasize words in the prediction. Click to show available topics.

Static Topics: Choose a user-generated static topic to make it active within WordQ

 **ThoughtQ:** Show/hide ThoughtQ dynamic topics

Tips

- The toolbar can be minimized to reduce distraction while WordQ continues to provide supports.
- Keyboard shortcuts, or hotkeys, are available for all WordQ buttons to quickly toggle their functions. These hotkey assignments can be customized by the user.

Writing with WordQ

First, run WordQ if not already running. Then open an editor such as Microsoft Word or TextEdit.

Please note that many of the features that we're about to examine can be customized. This part of the tutorial is written with the assumption that no customization has yet taken place. Some of the keystrokes mentioned here may change as a result of customization.

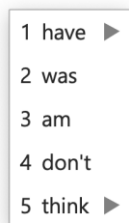
For demonstration, we're going to type a short sentence that would contain some spelling errors if written without WordQ. We'll show how the student can use WordQ to enter the sentence without the errors.

The sentence will be:

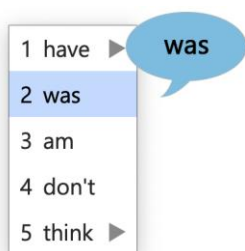
"I liek the weakened."

We want to enter "like" and "weekend" instead.

Type the capital "I" followed by the spacebar. You should see the floating word prediction window at this point with words that naturally follow "I".



There are a couple of ways to review and select words in the list. You can hover over a word with the mouse and hear it spoken out loud.



When highlighted with the mouse, you can select the word and insert it into the document simply using a mouse click. You can also use the DOWN and UP arrows on the keyboard; with each arrow keypress, an adjacent word in the list is highlighted and spoken aloud. When highlighted, the desired word can be inserted by pressing the ENTER key. Of course, if you recognize the desired word in the list by sight, you can select it quickly by hitting the number key corresponding to the number beside a suggested word.

What if I select a word by accident?

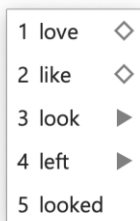
If you select a word by accident, you can quickly undo by hitting the ESC key. However, this undo will only work immediately after the selection.

Our next word will be the spelling mistake **“liek”**. Type the letter **“L”**.

You should notice that the correct word **“like”** actually shows up in the list. This is the first way we typically avoid spelling errors when using WordQ: its use of word combination knowledge helps it promote words that make sense given the student’s previous word(s).

We’re going to pretend that we don’t see the correct word and continue to type out **“liek”** *but don’t hit the spacebar*.

With **“liek”** in your document, you should see a prediction list containing spell-corrected choices like **“love”**, **“like”**, and **“look”**.



Arrow down through the list until you hear the word **“like”** spoken aloud and hit ENTER to insert it into the document.

The ability to review words in the list and have them spoken aloud helps the student find the correct word despite issues with spelling that can come with a learning difference. If the student does not hear the desired word in the list, more letters can be typed until the word does appear. As we’ve seen, the prediction algorithm is forgiving when it comes to the student supplying incorrect letters.

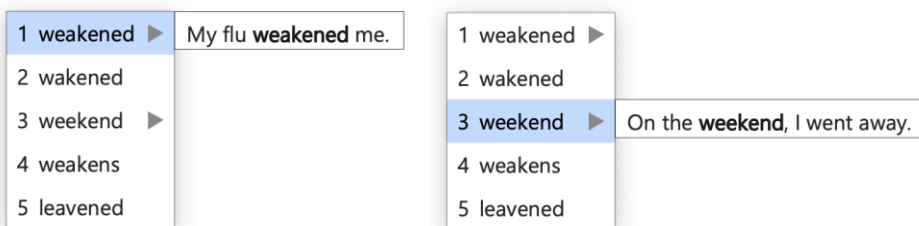
The word **“the”** should have been predicted automatically after choosing **“like”** so it can be selected immediately. Do that by typing the number beside **“the”**.

Now start typing **“weakened”**. Again, the correct form of the word should show up in the list after the first couple of letters, but pretend you don’t see it, and type out the full word **“weakened”**, which is a correctly spelled word, but it is the wrong near-homonym for the writer’s intent.

After typing out **“weakened”** (but before hitting space), you should see both **“weakened”** and the correct **“weekend”** in the list. Both words have a triangle beside them pointing to the right. A triangle indicates that the word choice has a usage example that’s designed to help differentiate between homonyms in these situations.

Hover over the incorrect homonym in the wordlist using the mouse. After a second or so, you should see the usage example appear (something like **“My flu weakened me”**). You can of course also highlight the word choices with the DOWN/UP arrow keys on the keyboard. When you highlight a word with a usage example using the arrow keys, you can see the usage example by selecting the arrow key corresponding to the direction the triangle is pointing (in this case right). A second or so after the usage example appears, it will be read aloud for reinforcement.

Now highlight the correct form **“weekend”** and show its usage example (**“On the weekend, I went away.”**)



Through these usage examples, students can differentiate between homonyms and near homonyms to choose the word that makes sense in the sentence they’re writing.

Choose the correct word **“weekend”** any way you like.

Type the period to finish the sentence. You’ll notice that a couple of things happen automatically at this point. First, the space that was automatically added after the word

selection is deleted so that the period can go in the correct location. Second, the entire sentence is automatically read back so that you can hear whether the word flow makes sense to catch mistakes and learn proper pronunciation. If something sounds wrong, you can go back and edit the sentence, however, it is often better to continue getting ideas down first without distraction; then go back and proofread/edit later. Third, when you type the next letter, it will be capitalized automatically so that you can begin your next sentence without having to press SHIFT.

Tips

- Since WordQ is using the numbers for inserting word predictions, you might be wondering **how you can add numbers to your document**. Simply, temporarily turn off word prediction by toggling the **Word Predictions** button in the toolbar, then turn it back on when done. There are other possibilities. If the keyboard has both a number line and a numeric keypad, you can choose which one will be used to choose predictions. The other will be available for entering numbers as always.
- WordQ provides several independent selection methods for inserting a predicted word into the document. Students with limited mobility (e.g., those with cerebral palsy or a spinal cord injury) may get the most utility from selecting predictions by number, as the main consideration is to reduce the physical effort of typing by reducing the number of keystrokes the student must type. Students with learning differences (e.g., dyslexia) or other barriers to reading and writing might use the arrow keys or mouse selection more because the primary need is to hear possible word choices spoken aloud to help with spelling.
- A student can experiment with typing different letters to see and hear what words are formed with those letters. Also, for a student having difficulty reading or decoding suggested words, hearing words spoken helps them choose their desired word. If their desired word is not displayed, a student can continue typing until it is displayed or try different letter combinations. While WordQ incorporates creative spelling in its prediction algorithm and will account for misspelling when making suggestions, it is a useful strategy to see and hear what words are suggested. The student then learns how different letters generate different words.

- A student who struggles with spelling may or may not need to use word prediction with every word. Generally, they do not, and the word prediction is most useful for more difficult-to-spell words and when the effort of spelling discourages them from advancing in the sentence. In this situation, word prediction helps them continue writing by reducing their frustration. The student may also use WordQ's built-in speech recognition to quickly say a word or phrase so that they do not lose their train of thought. The key goal is to get ideas down quickly and independently.
- WordQ continues to suggest words in the background, even when the word list has been hidden (toggled off) by clicking the Words button. A student may hide the word list until they need it and toggle it on for appropriate suggestions.
- Sometimes, a root of a word (e.g., "begin") may appear before various forms with different endings (e.g., "beginning" or "beginnings"). Here, the root word can be selected followed by pressing BACKSPACE to display variations of that word with different endings.
- As you move the text cursor through a document you will notice that appropriate word predictions will be shown wherever the cursor is placed, even midway through a word, as WordQ considers both preceding letters and words in its suggestions. When you move the text cursor with the arrow keys, the word list will temporarily disappear as you move; it reappears when you stop moving.
- The display of the word list can be customized to display 1 – 9 words; font; font size; order of words; vertical or horizontal listing; and whether it follows the text cursor or remains left in place.
- While displaying the word list below where you type is appealing when demonstrating WordQ to a student, it may be visually distracting for continual use. Instead, many students prefer to have it left in place in a fixed location, such as the bottom-right corner of the screen.
- By default, speech feedback is provided for word, sentences, and word predictions. Speaking individual letters is an option as well as speaking application and popup menus. Speaking individual letters may be useful for students with physical disabilities who might like auditory confirmation of each selected letter.

Proofreading/Editing

WordQ supports proofreading by allowing students to listen to their work being read aloud while their text is simultaneously highlighted. The voice acts as an unbiased observer speaking back exactly what was written. Mistakes, such as wrong word choices, missing words, or poor word order, stand out as sounding strange. Students then step through the sentence word-by-word to locate any mistakes. Proofreading is designed to be used alongside word prediction to help the student review and refine their writing so that the result sounds like what they had in mind when they originally imagined it.



In this section of the tutorial, we will be working with a short paragraph. To begin with, please copy the paragraph below into a document, exactly as written, with mistakes included. Use this as an opportunity to try out the various prediction selection and echo features that we discussed in the last section.

The four seasons is gentle reminder that of pasting of time. The year cycle of bedding growth harvest and rest provided regular signal to us that time marching forward in spite of our occasional in ability to note it.

With common Microsoft applications including MS Word, WordPad, Notepad or Outlook, the current sentence is spoken while each word is highlighted visually, emphasizing the visual/sound of each word. All of this is done directly in the application.

When non-Microsoft applications are used (e.g., Chrome, Adobe applications), word-by-word highlighting is not always available, and you must manually highlight the text before entering proofreading mode. If word-by-word highlighting is desired in these situations, you can easily copy and paste the text into Notepad for proofreading.

Strategy

1. Position the text cursor anywhere in the sentence.
2. Click **Read**  to highlight the sentence.
3. The sentence will be highlighted, and the prediction box will temporarily disappear. The keyboard is disabled except for SPACE, ESC, and the arrow keys.
4. Press SPACE to begin reading the sentence. Each word is highlighted as it is spoken. Listen for any mistakes. Press SPACE to pause/resume reading.
5. The sentence will be highlighted again after it has been read so that your focus remains on the sentence.
6. Whether reading or paused, you can locate specific errors by repeatedly pressing RIGHT or LEFT arrow keys to move word-by-word within the sentence. When a word sounds wrong, or when words together sound wrong, you have located an error.
7. Press the ESC key or click in the text with your mouse/trackpad to leave proofreading mode and make edits with the help of word prediction.
8. Read the sentence again by clicking **Read** .
9. Repeat stepping through a sentence to locate mistakes and edit.
10. Go to the previous or next sentence by pressing UP or DOWN arrow keys.

This is the general strategy that students can use to proofread their writing, finding and fixing errors along the way. We'll look at how we would use this strategy to fix the paragraph that you just transcribed.

Place the insertion point anywhere in the first sentence and click **Read**. Notice that the sentence is highlighted. Press SPACE to start reading. The first thing you might notice is that **"is gentle"** doesn't sound right together; a word is missing — **"a"** after the word **"is"**. Read the sentence again by hitting SPACE, but this time use the RIGHT and LEFT arrow keys to step through the sentence word-by-word. When the word **"is"** is highlighted, hit ESC to leave reading mode and add the **"a"**.

Click the **Read** button so that the sentence is read again. This time, notice that **"pasting"** doesn't sound right. Again, use the RIGHT and LEFT arrows to step word-by-word until **"pasting"** is highlighted, hit ESC and notice that the insertion point is just to the right of the end of that word. By arrowing through the prediction list using the DOWN arrow, you might find that the correct word, **"passing"** has been predicted and you can select it. If it hasn't been

predicted, just backspace letter-by-letter and/or add more letters until the correct word appears, and then select it.

Read the first sentence again. Notice that the word **“that”** is out of place in the sentence and should be deleted. Hit ESC, select **“that”** and delete it or backspace over it. Read it again and it will still sound odd; there is a missing **“the”** after the first **“of”**. Add it. Listen to it again, and now the sentence sounds right.

Even though the second sentence is longer and there are more errors, the same strategy applies for proofreading and correcting it. Get into read mode and listen to it. Use the RIGHT and LEFT arrow keys to find the individual mistakes. Sometimes, you may need to go back and forth between listening to two or more words to be sure. Correct them one-by-one and listen to the sentence again after each change.

- Change **“year”** to **“yearly”**.
- Change **“bedding”** to **“budding”**.
- Change **“provided”** to **“provides”**.
- Change **“signal”** to **“signals”**.
- Change **“marching”** to **“marches”**. (backspace over **“ing”**)
- Change **“in ability”** to **“inability”**.
- Change **“note”** to **“notice”**.
- Finally, add commas after **“budding”** and **“growth”**.
- If you’re not sure about punctuation, experiment. Put in a comma or a question mark where you think it might go. Listen to the sentence being read back. The speech will automatically pause at each punctuation mark and the intonation will change. Make changes until you are satisfied with how it sounds.

Hopefully, the proofreading strategy seems straightforward after this practice. Although the process may seem time consuming it will eventually become second nature and the benefits of proofreading will shine through.

Tips

- When most people proofread, they typically read what they think they wrote, not necessarily what they wrote. A computer reading back aloud does not know what was intended, only what was written.
- Proofreading independently can reduce a student's frustration with the mechanics of writing so that they can complete a draft document and then seek feedback from a teacher or parent. This discussion can focus more on content, less on spelling and grammar.
- The structured proofreading strategy is a technique that might even be followed without technology support: reading your writing aloud (if possible) is a great way to catch mistakes that might otherwise be missed.

You've reached the end

This tutorial was designed to cover the most basic features of WordQ. There are more features than we can reasonably cover in a simple introductory tutorial. Some of these other features (e.g., speech recognition, topic lists, ThoughtQ dynamic topics, PDF accessibility and WordQ customization) will be explored in other materials. We hope that the foundation provided by this first tutorial serve you well as you explore the use of WordQ with your students.