

iWordQ App

Vivian Tsang, PhD, Chief Science Officer, Quillsoft Ltd. Fraser Shein, PhD, President, Quillsoft Ltd.

What is iWordQ?

iWordQ is a simple, yet powerful App for the iPad to help you write with greater independence, confidence, and ease. Its design promotes active use without distracting you from reading and writing. Everyone can benefit from using iWordQ.

iWordQ differs from desktop WordQ in that its tools work within its own space rather than on top of other applications. Further, instead of just duplicating functionality, iWordQ provides a purposeful *seamless separation* of reading and writing.

Without constraints by external applications, which dictate how text can be manipulated, iWordQ focuses and pares reading and writing down to the bare essentials for optimal literacy. In particular, iWordQ incorporates several innovations in presenting and speaking text to enhance your reading experience, which in turn enhances your writing experience.

In Writing mode, a plain text editor is used for writing with the support of word prediction, abbreviation-expansion and speech feedback features. It places emphasis on helping you get your ideas down without the distraction of formatting and layout. Another App, such as a graphic organizer, may be used for initial organization of ideas and share its outline text for editing within iWordQ. In turn, iWordQ can share its text with other Apps for final formatting, or it can share using email, iMessage, Facebook and Twitter.

In Reading mode, text from the Writing mode is shown in a visually pleasing manner to improve readability. Speech feedback and highlighting that vary with activity influence reading. Activities include proofreading, reading to learn, silent reading, reading aloud, and casual reading/listening. A patented text chunking method is available that has been developed specifically to enhance comprehension and readability of text by focusing on one text chunk at a time.

For printed text, the traditional typographical practice is to promote the flow of text for the best readability. (It is the flow of ideas, not just the clarity of the individual letters and words that promotes readability.) High-clarity text, however, may be seen as individual objects and much less as a flow of text. A screen of text can appear to be an overwhelming brick wall to a reader. The Reading mode helps break down the wall by de-emphasizing peripheral text, and by highlighting text as chosen by you (by manual swiping, or automated at the chunked or sentence level).

You can review your own writing as a reader, using any of the available reading strategies, from casual reading for the overall flow of ideas, to the soundness of the chosen phrases. You can also alternate between Reading and Writing modes, so that your writing skills are strengthened by reading, and vice versa.

Writing mode: Standard Edition

The Writing mode incorporates the strengths of desktop WordQ but is designed with the iPad environment in mind.

Predicted words are displayed as you type. These words are presented either vertically (on the left or on the right side of the screen) or horizontally (above the onscreen keyboard). A floating prediction window is intentionally not included because it would cover up too much of your writing given the limited dimensions of the iPad.

Tap a predicted word to select it. Even if you are creative in your spelling, iWordQ will still predict accurately. As you move the text cursor, predictions are shown in-context. Touch and hold a predicted word to hear it spoken with high-quality text-to-speech. Hold a bit longer and usage examples are provided to help distinguish close-sounding words, including homonyms.

Words typed or selected from the prediction list are read out loud. As you complete each sentence by adding ending punctuation it is read back to you when you tap <space>. Selected text can also be spoken with word-by-word highlighting.

You can also use your own abbreviation-expansions, or text macros, to simplify your writing. Abbreviations are shown in the prediction list.

Standard iPad finger gestures are used with the text. Double-tap a word to select a word; drag to extend selection. Tap with two fingers to select a paragraph. Swipe with a single finger up or down to scroll through your document. Use your thumb and index finger and either pinch in or out to reduce or expand the font size.

Proofreading is similar to desktop WordQ but it uses a media control to advance forward and back by sentences/words. The onscreen keyboard is hidden at this time.

Text documents are saved automatically and are retrieved from the Documents menu. Dropbox support is included for sharing documents across systems.

Writing mode: Pro Edition

The Pro edition is intended for students in senior secondary school, college and university, as well as working professionals. As students gain confidence and competence in their writing skills, their focus of attention is less on the spelling and the grammaticality of the writing. That said, the existing word prediction and speech feedback continue to alleviate these foundational issues. The emphasis now is less on individual words, but more on the overall flow of ideas.

When students enter into senior secondary school and further, they are expected to write in a stylized language appropriate for the subject matter. Depending on the domain, the range of vocabulary may be restricted to a small set of technical terms, and how they are combined can be limited to a certain style. Connective phrases may also be particular to certain domains.

The Pro word prediction dictionary and user vocabulary are derived using a range of newspaper, magazine, professional journal and academic writing. Such text provides a rich source written and edited by professional writers, and serve as a blueprint for learners of academic and professional writing. It also contains about 40,000 more advanced words.

In technical writing, for example, you often have to express complex ideas as compactly as possible. Say you examine the relationship between "market orientation" and "business performance." You may express it as a string of nouns "market orientation-business performance relationship." With the Pro version, productivity is enhanced by fewer keystrokes needed to produce such phrases. It may take more keystrokes with standard iWordQ given its reduced dictionary size appropriate for younger users.

Another feature is the continuity of suggested words appropriate for the writing level. To illustrate, say you begin with the word "subsequent." A lower-level vocabulary may suggest "generations", "to", "come" ("subsequent generations to come"). With the Pro vocabulary, it is easy to predict "research", and "findings" ("subsequent research findings"). When you are stuck in expressing an idea, wanting to sound professional is one of many hurdles in the higher levels. You can begin with typing one word and observe the range of suggested phrases that other writers have used.

Reading mode

The Reading mode is designed with the reading experience in mind. Similar to proofreading in Writing mode, the iPad onscreen keyboard is hidden. Your current sentence from the Writing Mode is shown in black text, and text in the current paragraph is shown in gray. Text in surrounding paragraphs is shown in still lighter gray. This allows you to focus attention on the current sentence, while maintaining visibility of the surrounding text. Another sentence can be put into focus by simply tapping on it.

The Reading mode takes advantage of the iPad environment to engage you in actively participating in the reading experience. Words and phrases are highlighted by tapping and swiping across a group of words, which are then spoken out when you lift your finger. This is useful for focusing on and hearing specific word combinations. Instead of the forward and backward stepping across words while proofreading in the Writing mode, here you always swipe forward to hear word combinations.

An automated reading control is on the left margin of the text and is associated with three levels of continuity: manual step-by-step reading, reading the current sentence, and reading continuously. With the different levels of control, you can choose to read casually for pleasure, or to read carefully for proofreading or for learning. Furthermore, you have the option to focus on text chunks (rather than individual words) similar to how educators teach reading. Our patented text chunking segments each sentence into smaller fragments. Averaging five to seven words long, a chunk ends at a semi-grammatical location where the subsequent fragment would continue the train of thought, often by filling in the missing information in the current fragment.

In long sentences, the segmentation is helpful two ways. First, the chunks break up the sentence into smaller components, but the components are not so small (e.g., at the word level) that the connection between meaningful components is hidden. Second, the chunks help emphasize the order of the components in a semi-grammatical way. Consider the following sentence¹:

"Beginning with Garnett," Schwarz writes, "English translators have tended to view Tolstoy's sometimes radical choices as 'mistakes' to be corrected, as if Tolstoy, had he known better, or care more, would not have broken basic rules of literary language."

Our chunking breaks this into:

"Beginning with Garnett," Schwarz writes, "English translators have tended to view Tolstoy's sometimes radical choices as 'mistakes' to be corrected, as if Tolstoy, had he known better, or care more, would not have broken basic rules of literary language."

While the author's use of commas helps reading, chunking helps highlight the salient components (English translators viewing Tolstoy's wording as mistakes) and side details become obvious as flourishes ("as if Tolstoy, had he known better...")—Tolstoy's awareness of his stylistic choice is inconsequential.

Visually, when text chunking is turned on, the chunks are not presented all at once. You can tap anywhere in the current sentence. The chunk at the that location is highlighted and spoken out. The reading control can also be used. While listening to a single sentence or sentences continuously, a short pause is inserted between chunks. The intent is to mimic a good speaker, for whom a short pause allows you time to digest the previous chunk, and depending on the breaking point, provide a level of anticipation for the next chunk to supplement or complete the overall message. This draws you, the reader into the text.

When speech feedback is turned off, iWordQ can be used as a teleprompter. You can read aloud at the same pace as if spoken by the text-to-speech engine. This is useful for someone who is preparing for a speech and for those whose English is not their first language and wish to practice their spoken English.

Finally, iWordQ is also suitable for casual reading and skimming. Turn on the automated continuous reading, with or without text chunking. While the highlighting of current sentence or current chunk is on-going, you can choose not to pay attention to the screen. At the appropriate spot, the screen will scroll itself so that you can always catch up.

¹ Gessen, Marsha. "New Translations of Tolstoy's 'Anna Karenina." *The New YorkTimes* Dec. 24, 2014. Sunday Book Review BR1, Print.