Desktop Vocabulary App

Core Function

App is based on a master list of words uploaded by the user. The app

1) compares the words in a file or webpage to the master list of words.
2) boldfaces the words in the file or webpage that appear on the master list.
3) Creates two lists of all the matching words found in the file or webpage: a list in which the words appear in sequence, and a list in which the words appear alphabetically
4) Matches the words to a set of definitions that have been created by the user (perhaps at some point we will license definitions from a dictionary)
5) Creates a series of test functions for students, as described below.

Test Functions

The purpose of the test functions is to 1) establish a personalized set of vocabulary words for each student, based on the student's reading; 2) create review exercises and quizzes for the student.

Pretest Function
- Shows vocab word by itself;
    - Tutor can click a checkbox to show word in the sentence in which it appears in the text. Tutor can click another box to always show words in context.
- Button for Correct, Incorrect; student tells tutor definition, tutor clicks the appropriate button
- Clicking either button reveals the definition of the word and the word in its sentence context
- If student gives correct def, word does not appear on the pretest while the student is reading that book.
    - Refinement: None of the words related to the *root word* (see below) appear in the pretest
    - If student gives correct def three times in a row (over a series of books), word is added to the student's list of *mastered words* (see below).
- If student gives incorrect def, word is added to the student's *session list* (see below).
- Additional stuff
    - Pretest page shows the title of the book that the word is taken from

Session List

The session list is the list of words added during a single session
- Session list is visible from the Pretest screen (and perhaps other screens as well)
- Words can be added to the session list using the pretest function
- Words can also be added to the session list manually: tutor clicks on list and types in a word

Review Exercises
- Exercise 1: Student sees definition, types in word
- Exercise 2: App produces *x* sentences from the book with blank spaces instead of vocab words; it also gives a "word bank" of *x* words. Student types the words into the blanks. Answers can be checked only after student has typed in *all* ten words.
    - Level 1 Check: "*Y* answers are incorrect"
    - Level 2 Check: show incorrect answers in red
    - Level 2 Check: wrong answer crossed out, right answer written in
- Note: I'm not creating an exercise for "Sees word, types definition" because the definitions are sometimes too long to memorize exactly

Quiz / Test Function
- Quiz 1: Last week's words
    - App produces a list of previous week's words, with toggle switches for "Correct," "Half Credit," and "Incorrect."
    - Student pronounces and defines word; tutor chooses the appropriate setting
    - Results of quiz are displayed and stored
- Quiz 2: Cumulative Quiz
    - This quiz is based on the existing cumulative list, minus the words from the previous week.
    - A ten-item quiz is created by choosing words at random from the cumulative list, with the toggle switches
    - Student pronounces and defines word; tutor chooses the appropriate setting
    - Results of quiz are displayed and stored
- Test
    - When the cumulative list reaches a certain number of words (usually 100), the tutor gives a final test on a large number of words
    - Tutor clicks button that says "Create Test."
    - Tutor is asked to determine number of words that will be on the test
    - App produces a random list of words taken from the current cumulative list, with toggle switches
    - Student pronounces and defines word; tutor chooses the appropriate setting
    - Results of test are displayed and stored

Cumulative Lists
Cumulative Lists allow tutors to establish longer lists of words that the student will need to know for cumulative quizzes. For example, the tutor may want to base cumulative quizzes on all words learned since January 1. Once the list reaches a certain number of words (typically 100), the tutor can create a new list.

- Pretest page has a button that says "Start new cumulative list." Clicking this button brings the previous cumulative list to an end and starts a new one.
- Student's complete list of vocab words is broken down by these lists

Reports Page
- Review doc: contain lists of words, plus
    - Number of times word was added to a list
    - Quiz / Test results per individual word: # of times word tested, # of times student defined word correctly
    - Book(s) word was added from
    - definitions and sample sentences.
- Quiz history (scores for pretests, quizzes, cumulative quizzes, and tests)
- List of *mastered words*
- Badges (given when student passes certain milestones, does well on quizzes and tests, etc.)

Refinements (nice to have)

Root Words

Words are linked in the database to "root words." The root word is the simplest form of the word, or its infinitive. For example, the root word for "scorned" is "scorn." The root word for "resentful" is "resent." Any work done for a root word applies to all the words that are related to the root. For example, if the student masters the root "scorn" he will not be tested on "scorned."

Flag Repeats

Suppose a tutor adds to the session list a word that already exists on the student's complete list of words; the app flags the word as already added. The tutor can click on a button to see what date(s) the word was previously added to the list. [Pedagogical Note: There is nothing wrong with adding words to the list multiple times, but it's good to know when it happens.]

Tagging

Tutors can tag vocab words. All words are automatically tagged with the title of the book or short story and the name of the author. Tutors can create additional tags to categorize words: possible tags could include "sailing," "emotions," "classical roots" and so forth.

Pdf files

Click on a processed file or web page to create a pdf and email it to the student.

Personalized Etexts

Student receives an html file with a personalized copy of the text. In this copy, words that are normally bolded are color-coded as follows:
- Green: mastered word
- Orange: on student vocab list but not mastered
- Black: word not tested or mastered yet

Proposal Version

Desktop Vocabulary App

Background

Vocabulary acquisition is one of the more frustrating aspects of learning college-level English. Typical tricks, like learning by word roots, cover only a fraction of the necessary words. Most vocabulary books put words in arbitrary groups, making definitions difficult to recall in practical settings. Finally, students rarely receive the regular exposure they need to master the particular ways that words are used.

The key to solving this problem is to foreground vocabulary words that students encounter in their reading. By choosing words directly from the reading and developing exercises based on these readings, teachers can 1) show students a direct relationship between reading and learning vocabulary; 2) speed learning by providing a larger context for the words; 3) give students regular exposure to the words that they will encounter most often, thus making the most important words stick most firmly in the student's mind.

In addition, vocabulary acquisition should be based on a student's individual needs. A program of vocab learning should give individual students just the right amount of review so that they can move forward at a pace suitable for them.

Improve Your English is Silicon Valley's oldest English-only tutoring company. Based on 14 years of teaching experience, we have created a list of nearly 15,000 English root words and variants that students should know for college-level reading. These words are taken from classic literature and contemporary journals, and the list is constantly updated as we incorporate new readings into our program. We are eager to take our expertise to the next step by developing a desktop application that will make it easier for students to master English vocabulary.

Description

Create a desktop application for learning English vocabulary based on electronic texts. This application will be operated by tutors working with students in a 1-1 setting. The data generated by the application will be accessible to tutors, administrators, students, and parents.

Core Functions
- Compare words in etext to word list. Create new version of etext that boldfaces words appearing on the list.

- Based on the words in the etext, create functions for pretests, quizzes, tests, and review exercises.

- Create student database to track results for individual students.

- Create reporting function that shows student performance on assessments, as well as granular detail on word acquisition and mastery. Also gives badges for performance milestones.

Our full proposal contains additional functions that would be nice to have. However, we don't need them for the first version of the app.

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