

Learning English Vocabulary: A Choose-Your-Own-Adventure Graphic Novel

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Abstract: With a development team of six people (two engineers, two artists, one writer, and one producer/designer) working for ~8 months, we created an English language learning game for Android tablets. The game, named *The Tomes*, facilitates vocabulary acquisition and retention by providing an engaging experience where reading and understanding vocabulary words in-context really matters: a choose-your-own-adventure graphic novel. Aimed at 6th graders in American public schools, *The Tomes* gives players the opportunity to make meaningful choices in a branching narrative. In addition, at certain points in the story, players complete timed minigames based on their knowledge of vocabulary, the result of which directs the outcome of the current plot and, behind the scenes, provides educators with useful assessment data. The game is completed and, as of January 2012, is being pilot tested in some New York public schools.

Overview

The primary gameplay of *The Tomes* is reading an animated graphic novel, inspired by the popular iPhone game *Surviving High School*. During the story, players make choices to direct the path of the narrative. From the Biemiller vocabulary lists for middle school students (Biemiller, 2009), the game highlights vocabulary words that appear in the story (see Figure 1).

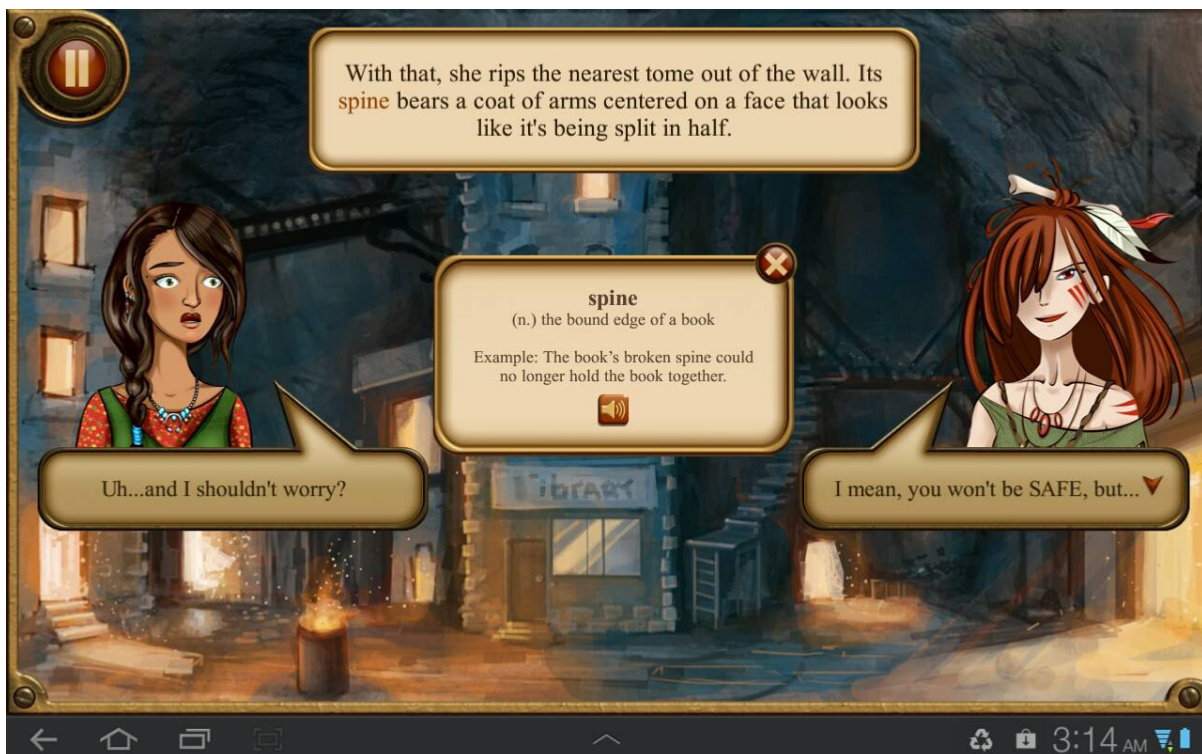


Figure 1: *The Tomes* sample screenshot, having touched a vocabulary word

Players may optionally touch the highlighted words. A dialog appears with a context-sensitive definition, part of speech, sample usage, and correct pronunciation by a professional voice actor, not computer-generated speech (see Figure 1). Note that providing context-sensitive definitions is extremely time consuming from a content-creation perspective. Unlike a normal dictionary definition that provides many different variations and the reader is left to decipher the correct one, in this game, the reader is provided with the correct in-context definition, part of speech, and pronunciation. Though assessment data is still pending, we believe this in-context approach is superior to the dictionary definition approach.

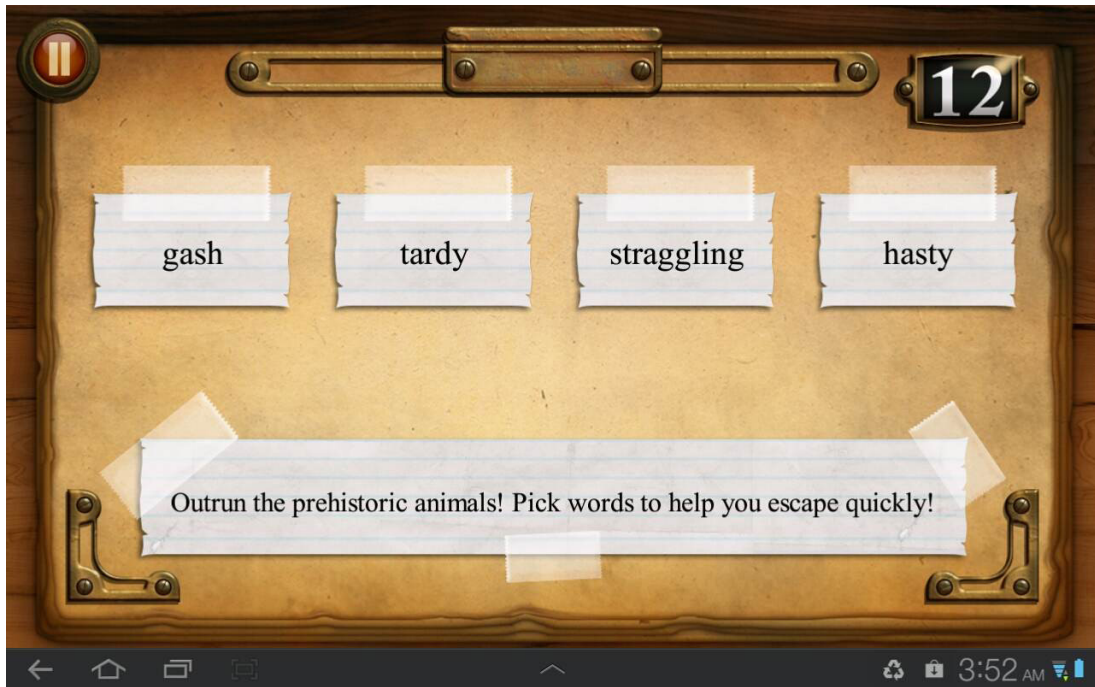


Figure 2: Timed minigame that impacts story outcome and provides assessment data

At various points in the story, players experience timed minigames. Players see an instructional sentence and four words, and then they must pick the correct word as many times as possible (see Figure 2). After each touch, new words appear, though the instructions remain the same. The instructions are relevant to the current plot of the story. After the minigame, the story branches in different directions based on the player's performance. Finally, to help manage the inherent complexity of branching storytelling, the development team created a tool to visualize the story. The automatically-generated story tree helped developers quickly identify problems in the story and balance different sections (see Figure 3).

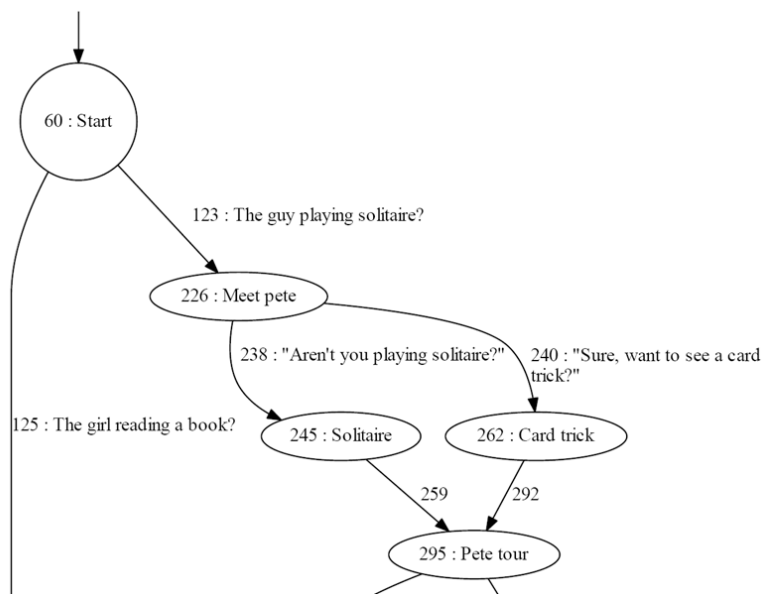


Figure 3: Output snippet from the story visualizer tool

References

Biemiller, A. (2009). *Words Worth Teaching: Closing the Vocabulary Gap*. Chicago: SRA.