# Case Study: Susie Q

Susie, an 8th grade student, is currently using both gestures and a refreshable braille display with her iPad. However, she resists learning to use the Bluetooth keyboard on the iPad or JAWS on the computer; she only wants to use VoiceOver gestures with a few refreshable braille display commands. She knows her braille code and is a decent braille reader and writer. However, it does take her significantly longer than her peers to complete most reading and writing assignments.

## Identify Susie’s Strengths/weaknesses

VoiceOver Gestures

* Physically creates gestures easily
* Knows and uses gesture commands – predominantly uses right/left flicking

Refreshable Braille Display Commands (RBD)

* Physically creates RBD commands easily
* With some prompting will use many navigation commands; habitually switches between RBD commands and gestures; more comfortable with gestures
* Has to think through the required steps with editing RBD commands (slow process)
* Does not use shortcuts such as jumping to first/last element or moving by containers (uses multiple right/left flicks instead)

Bluetooth keyboard Commands (BTK)

* Resistant to learning BTK; however, no issues with physically creating commands
* Uses only arrow keys; has not learned other commands
* Does not type with QWERTY keyboard
* Has been unsuccessfully introduced to a computer

Navigating the iPad

* Navigates the Home screen with gestures and some RBD commands
* When typing or navigating using the RBD, frequently checks the braille
* Waits for VoiceOver to stop talking before giving next command (very slow even when doing familiar tasks)
* Basically independent with tasks; sometimes requires verbal prompt
* Completes familiar tasks by rote routine; does not independently learn a new app
* Does not use short cuts (move to first/last element, move by containers, etc.) – maybe does not fully understand app layout or short cut navigation commands?
* VoiceOver speech rate 40%

## Susie Q’s Summary

Susie has learned the basics about an iPad using gestures and some RBD commands. However, there are gaps in her knowledge and skills. Susie currently does not fully understand the layout of the screen and the corresponding shortcut commands. She is slow to navigate, checks her braille frequently instead of relying on VoiceOver speech and sound clues, and has not learned “muscle memory” required to do familiar tasks quickly and without thinking. To be successful, Susie should first fill in these gaps before moving on to the BTK. Touch screen devices enable students with visual impairments and blindness to quickly learn the layout of the screen – this is a huge advantage that Susie has not yet fully utilized. Initially take the time to teach Suzie to drag her finger around the screen in order to learn the layout - focus on understanding the spatial layout. Apps are typically laid out as one-third, two-thirds screen (such as Mail app) or full screen. Tool bars are typically at the top of the screen but may be at the bottom or side. Option buttons are located in the Tool bar. There are shortcut commands to navigate quickly to these areas. Once Susie has truly mastered using the RBD commands, pair these familiar RBD command with BTK commands.

## Susie Q’s Plan

* Review and **Drill** gesture commands on the Home screen daily (make this into game!)
  + Speed: Quickly right flick from first app to last app then last app to first app on Home screen – hearing only initial phonetic sound of each app (“f” for Photo, “P” for Pages, etc.)
  + Move first element to last element on the screen
    - Susie should immediately touch the area in the top left/bottom right; if she barely misses the item, then she should drag quickly to that item. (short cut gesture: 4 finger tap at top/bottom of screen)
  + Pair activity with RBD commands
  + Add moving by containers
  + Open a familiar app (such as Pages)
    - Drill same navigation commands (including jumping to first/last element on the page)
    - Drill completing specific tasks (opening/closing a specific document, emailing a document)
  + Activity: create a list of Knock Knock Jokes (in Pages or Google Docs) and have student use the Read All command/Pause before hearing the answer
  + Review and practice editing RBD commands
  + Activity: use a fun poem and have Susie navigate and edit within the lines (Use the rotor to move by character, word, lines; replace specific words to create different or funny meanings)
* Learn to use VoiceOver sound clues
  + Example: “thunk” sound when at the end of the “page”; sound when an app is opened, higher/lower pitches when copying/deleting
* Drag finger to learn about familiar app layout and explore the options in the Tool bar
  + Practice exploring a new app
* Practice auditory skills – listening to VoiceOver hints when doing new tasks; do NOT check the braille
  + When doing a new task or learning a new command, be sure the she listens to the VoiceOver hint. Example: Touch the Status bar and listen to VoiceOver hint on how to open the Notification Center.
* Introduce basic navigation BTK commands - explain Quick Nav On (“Nav” means “navigation” commands)
  + Repeat activities above pairing BTK with gestures and RBD commands
* Introduce and practice Quick Nav off (Editing commands)
* Introduce and practice additional navigating commands when editing (Quick Nav off) – these are powerful editing tools!
  + Reading by paragraphs, move to the beginning/end of current line, etc. (Repeat Poem activity; create fill-in the blank sentences and replace “blank” with the correct word)
* Systematically increase the VoiceOver Speech Rate
  + Daily practice: Increase speech rate by listening to a simple paragraph at normal speed, increase speed by 5% and listen to the same paragraph again, increase by 5% again and listen; then decrease by 5% and listen once again.
  + Increase speech rate during familiar activities, such as when reviewing and drilling on the Home screen.
  + Increase speech rate during fun auditory activities such listening to the Knock Knock Jokes.