

Heuristic Evaluation: PickUpPiano

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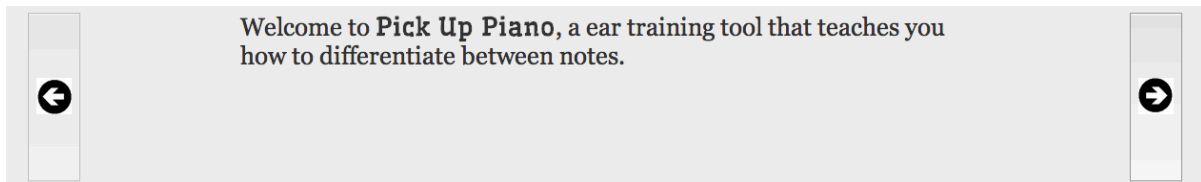
*Due to some issues with Firefox, this evaluation was done using Chrome

1 Navigation Menu

1.1 Navigation Arrows

To make use of this interface, the user must be able to easily navigate to the relevant exercises using the navigation menu at the top. However, there is not a strong affordance suggesting that the arrows will change the entirety of the content in the navigation menu. This issue may be overcome through use of good whitespace/grouping/layout that may suggest what the arrows actually do.

Issues: Anticipation & Learnability
Severity: Major



1.2 Sliding Text

Once the user is able to use the arrows, there is a sliding animation that transitions content in and out of the navigation menu. However, the text/input boxes slid differently (or not at all in some cases).

Issues: Aesthetic
Severity: Major

1.3 Alternate Control Schemes

As the piano interface makes extensive use of the keyboard (which is definitely a good thing), the user may want keyboard shortcuts for navigation. This would allow for more efficiency as the user could control everything from the keyboard. Maybe using the arrow keys or enter may be suitable for this.

Issues: Efficiency
Severity: Minor

1.4 Hidden/Disabled

The arrows in the navigation menu are definitely visible, which is great for



learnability. At the same time, it would be nice if the arrow buttons (and any others) to be hidden/disabled if they cannot be used in the current state.

Issues: Visibility
Severity: Minor

2 Piano Interface

2.1 One Strike, Multiple Notes

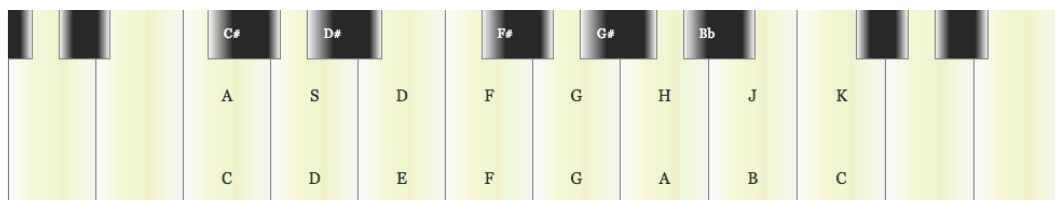
For the most part, the piano interface stays true to the metaphor of an actual piano. Yet, when a key is held down, this interface produces multiple notes, whereas a real piano would produce a long note. Users that have used pianos before may feel as if they now have limited control.

Issues: External consistency & Limited Control
Severity: Minor

2.2 Keyboard Mapping I: Piano Mimicry

Using the keyboard as, well, a board of piano keys allows for great external consistency and use of metaphor.

Issues: External Consistency
Severity: Great!



2.3 Keyboard Mapping II: Labeling Clarity

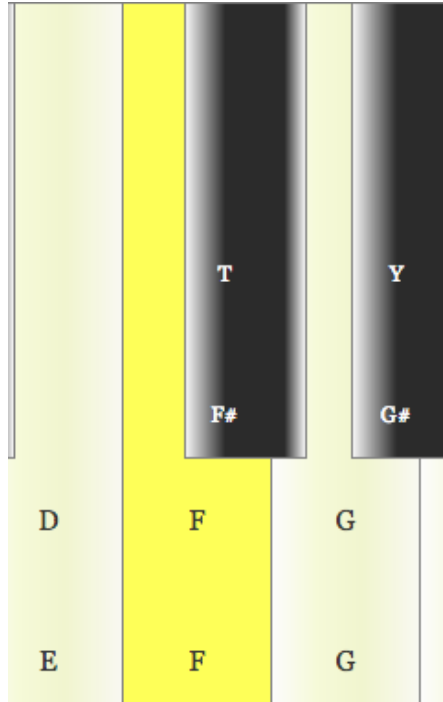
When the user initially sees the piano keys, it may not be immediately obvious what the multiple labels correspond to on each key. F and G are both mapped to their respective keys, but A and D are not, which is a little confusing at first. One must constantly look across the label mappings to see if the top row or the bottom corresponds to musical notes or keyboard notes.

Issues: Learnability
Severity: Major

2.4 Key Highlights

Users may start the application with the sound off. The use of highlighting and color changing across selected keys is a great way to show the user that the interface is working (and let them know that the issue is with the sound output, not the interface itself).

Issues: Color/Contrast & Feedback
Severity: Great!



2.5 Firefox Sound Issue

During this evaluation, using Firefox was attempted multiple times, none of which generated any sound output (this is why this evaluation was done using chrome).

Issues: Feedback
Severity: Major

2.6 Static Chirp

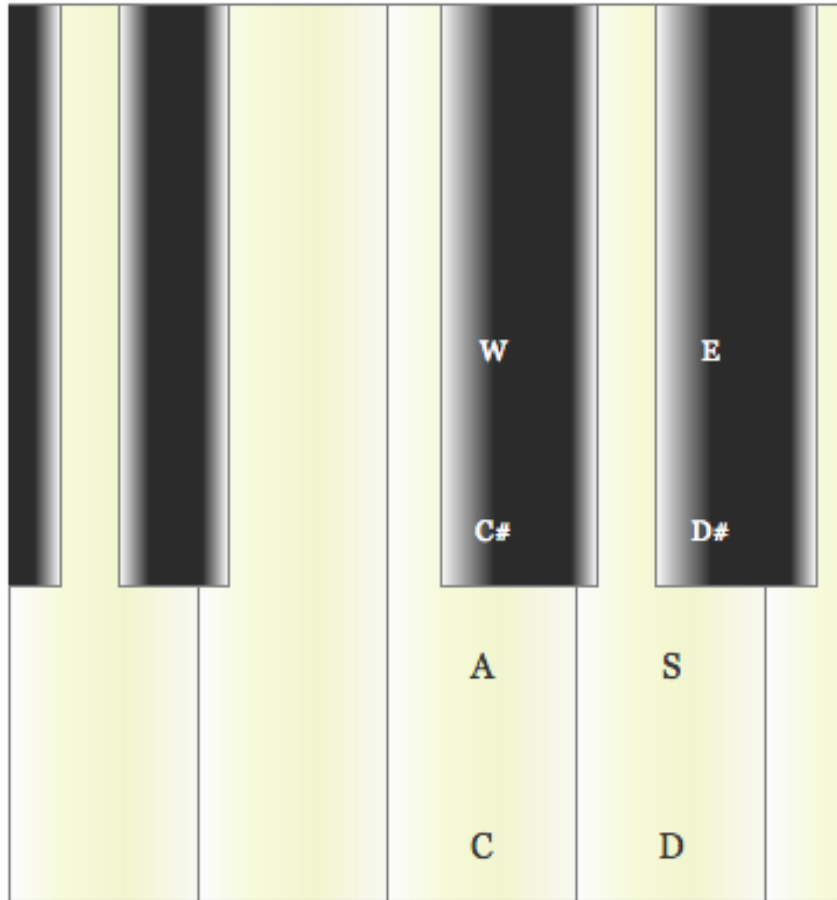
Occasionally (happened more often after the interface was used for a while) a short chirp/static noise was played just before each note.

Issues: Feedback
Severity: Minor

2.7 Varying Key Sizes

In this interface, the interactive keys differ in size from the cosmetic, unusable keys on the sides. Pianos should have keys all of the same size.

Issues: Internal/External Consistency
Severity: Minor



3 Exercises

3.1 Unresponsive Arrows

After starting the exercises, the navigation arrows were unresponsive and resulted in no changes.

Issues: Limited Control & Safety
Severity: Major

3.2 Old Exercise Selection Ambiguity

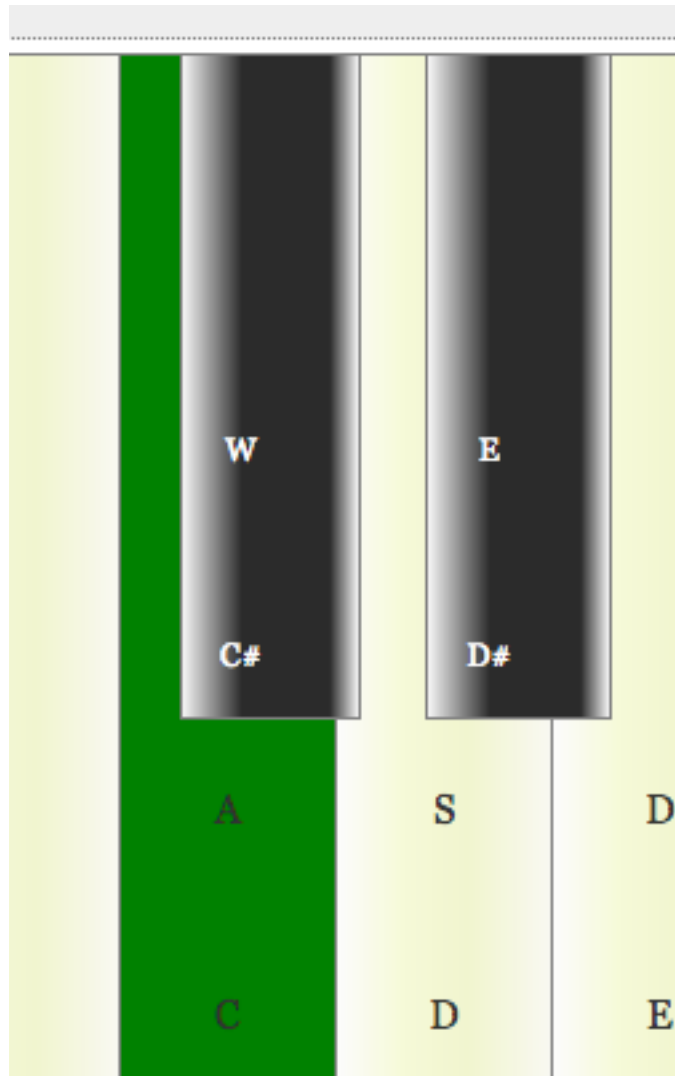
Since the prototype only had one instance of an exercise, it was unclear if using the scrollable exercise selection menu had any effect. The user may be left wondering if there is any way to select old exercises.

Issues: Safety & Feedback
Severity: Major

3.3 Green Key

During this evaluation, the text describing the use of a green key as a reference note was unclear. After trying to play the reference note and the tested note, both the correct and incorrect messages were displayed. Users who learn by doing may have issues with this.

Issues: Visibility & Learnability
Severity: Major



3.4 Hey! Listen!

At the beginning of exercises, when the “listen” example is being played, the user can still play notes. Additionally, pressing “Listen Again” does not grey out the piano interface, and the user is still able to interact with the piano interface.

Issues: Safety
Severity: Major