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Report: Spotify vs. YouTube Music Adding a Track to a Playlist Procedures

1. Which s procedure is faster?

Based on CogTool's results, **YouTube Music's procedure** is faster than Spotify's:

- **YouTube Music**: 25. 8 seconds
- **Spotify**: 27.3 seconds

This result indicates that YouTube Music's interface design facilitates more efficient task completion for activities such as searching for an artist, playing music, and saving songs.

Tasks	Youtube Design	Spotify Design
Playing a Track	25.8 s	27.3 s

Figure 1: CogTool

2. Why is the faster procedure faster?

The faster performance of YouTube Music can be explained by better design choices. These choices are responsible for reducing cognitive load, motor effort, and visual search time.

In YouTube Music, the search icon is positioned at the top-right corner, and upon activation, the writing area appears directly adjacent to it. This design ensures minimal hand movement and focus shifts, enabling a smooth transition between actions. In contrast, Spotify places its search icon in the bottom menu bar, while the writing area appears at the top of the screen, forcing users to move their focus and hands across the interface, introducing unnecessary time delays. This inefficiency is supported by **Fitts' Law**, which states that increased distance between related elements results in longer interaction times (Dix et al., 2004). Moreover, the **Gestalt principle of proximity** highlights that elements placed closer together reduce cognitive effort by establishing a natural flow (Benyon, 2014). YouTube Music adheres to these principles, while Spotify's design disrupts them.

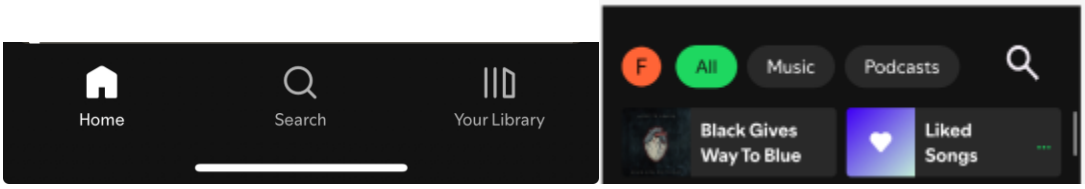
Additionally, YouTube Music reduces cognitive load by providing explicit labels for key actions. For example, the "Save" option is clearly written on the current song's screen, making its purpose immediately obvious. In Spotify, this same function is hidden behind a three-dot menu in the currently playing screen, requiring users to interpret its purpose and navigate additional steps. According to **Norman's Gulf of Execution and Evaluation**, such hidden actions increase task uncertainty and force users to spend more time verifying their actions (Norman, 2013). YouTube Music avoids this by directly displaying actionable elements.

Finally, YouTube Music simplifies the search process by displaying the searched artist at the **top of the results page**, reducing the time spent scanning. In Spotify, the artist appears on the **fifth line**, forcing users to scroll or visually process unnecessary options. This design aligns with the **visual hierarchy principle**, which states that users naturally prioritize elements at the top of a list, as they follow a predictable **F-shaped scanning pattern** (Benyon, 2014). By optimizing the placement of results, YouTube Music ensures faster and more efficient task completion.

3. How can we make the slower procedure faster?

Relocate the Search Icon and Writing Area

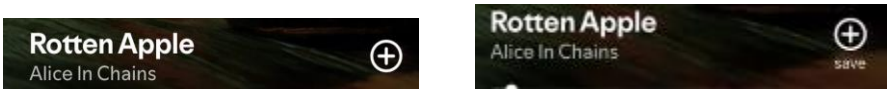
The **search icon** should be moved to the **top-right corner** of the interface. Additionally, when the icon is pressed, the **writing area** should appear directly adjacent to it, similar to YouTube Music. This would reduce the need for users to shift their focus and hand position, allowing for smoother and quicker interaction. The first figure demonstrates the original and the second figure demonstrates the improved one.



2. Display the "Save" Option Explicitly

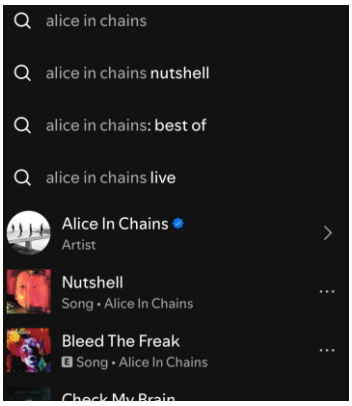
The **"Save" option** should be displayed as a visible button on the currently playing screen instead of being hidden within a three-dot menu. This adjustment would remove cognitive need and steps to navigating the menu to save a song. The first figure demonstrates the original and the second figure demonstrates the improved one.

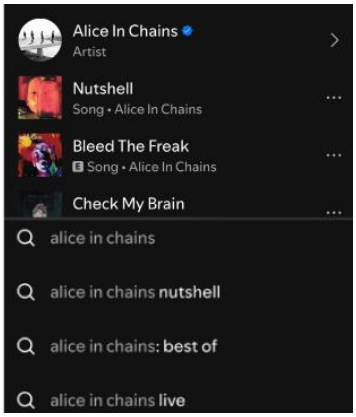
After pressing the save option, the improved application directs the user to the choosing playlist menu, instead of directing to the 3 dotted menu.



3. Optimize Search Results Placement

Spotify should ensure that the **searched artist** appears at the top of the search results page instead of being buried further down (currently the fifth line). This adjustment would eliminate unnecessary scrolling and make the desired option immediately accessible. The first figure demonstrates the original and the second figure demonstrates the improved one.





Total Estimated Time Savings

By implementing these changes, Spotify reduced its task completion time by approximately **~0.9seconds**, making it similar time to YouTube Music. These changes would significantly enhance the overall efficiency and usability of Spotify's interface.

Tasks	Youtube Design	Spotify Design	New Spotify D...
Playing a Track	25.8 s	27.3 s	26.4 s

4. References

- Benyon, D. (2014). *Designing User Experience*. Pearson Education.
  - Chapter 12: Visual Interface Design and Psychology
  - Chapter 21: Memory and Attention in Interface Design
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- Norman, D. A. (2013). *The Design of Everyday Things: Revised and Expanded Edition*. Basic Books.