

Genesis Ramos & Kaya Bobo Mini Project 2 Write-Up

Fitts's Law is a psychological principle that states that the time to click an object is determined by the distance from the mouse to said object and how big the object is. We considered Fitts's Law by making all interactable objects large, and because the project pages do not scroll, the combined short distance between objects and large size of them reduces interaction time because users do not have to be as precise when going to click them.

Hick's Law states that the time it takes to make a decision increases as the number and complexity of choices increase. Taking Hick's Law into consideration, there are only a few buttons to choose from on each page, which are the home button, back and forward buttons, and the carousel indicator.

Jakob's Law states that users spend most of their time on other websites and that they prefer your site to work the same way as those other sites. We followed Jakob's Law by using a circular carousel navigator, placed at the bottom of the pages, to show how far along you are in the lesson. In addition, we also included a navigation header at the top of the page, which is where users usually expect to see navigation bars.

The **Coherence Principle** is a concept in instructional design that suggests people learn better when extraneous material is excluded from educational content. We applied the Coherence Principle by only implementing text and pictures that relate to the lesson and removing unnecessary elements. This reduces the mental effort required to process information that is not essential to learning the core material, known as **extraneous cognitive load**. This refers to the type of cognitive load that is caused by unnecessary details that do not contribute to the understanding of key concepts.

The **Signaling Principle** is an instructional design concept that suggests that learners can process information more effectively when the organization of key information is highlighted or emphasized. We adhered to the Signaling Principle by placing the lesson's steps at the beginning of each lesson. By emphasizing the organization of important content in the beginning, it can help guide learners through the material more efficiently.

The **Multimedia Principle** states that people learn better when there is both text and graphics rather than just text alone. We applied the Multimedia Principle by implementing pictures and text pertaining to the lesson, both of which convey the same information. Combining textual and visual information enhances users' **germane cognitive load**, which refers to the mental effort in the working memory dedicated to processing content that is not essential but aids in the user's learning.

The **Spatial Contiguity Principle** states that learners benefit when related information is presented close together rather than far from each other. We applied the Spatial Contiguity Principle by integrating descriptive annotations with each of the explanatory graphics.

