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**Miller's Law** is a principle explaining that people can only retain roughly seven (plus or minus two) items in their working memory. With this principle in mind, we made sure to only include eight steps in our lesson.

**Chunking** is the method of breaking up large amounts of information into smaller, digestible parts. When excess information is crammed onto a single page, it becomes harder for the user to focus on important information. Keeping this in mind, we have only included one instruction per screen, effectively dealing with **intrinsic cognitive load**, which can be described as the effort used to deal with essential content.

**Working memory**, or active memory, is the ability to temporarily retain information for users to effectively accomplish tasks. Since users can only process so much information, we made sure not to push the limits of the user's working memory. We did so by only including essential information, easily converting short-term memory to **long-term memory**, where information is subconsciously processed in the mind for a long time.

**Law of Proximity** states that items closer together are perceived as related. This concept is shown in our navigation bar. The navigation buttons for the two lessons are located towards the right of the screen, while the home page button is isolated on the far left. The two lessons next to one another suggest that they are part of the same content grouping. It also suggests that you'll get a similar result clicking both. Conversely, clicking the home button implies something different will occur.

**Von Restorff Effect** states that when similar objects are present, the one that has the most visual difference is most likely to be remembered. We considered this concept by highlighting verbs and items in dark blue/bold. These key terms, while similar to the non-highlighted parts of the sentences, differ significantly in appearance, meaning the user is more than likely to remember them.

**The Zeigarnik Effect** is a principle that states that people tend to remember unfinished or disrupted tasks as opposed to completed tasks. We used pagination buttons to allow users to see the progress they've made and the steps they have left until completion.

**Serial Position Effect** is a concept that states people usually remember the first and last items in a sequence. We placed the full list of steps at the beginning and end of the module, ensuring recollection of the steps.

**Tesler's Law**, is the idea that all systems have a certain amount of complexity that must be dealt with. This means that we considered extraneous cognitive load by making unnecessary information muted in color scheme, like the pagination button.

**Fitts' Law** is best described as the time and distance it takes to click an object. To demonstrate this, we kept the forward and back buttons and pagination function close to each other. The big sizing of the buttons help to reduce the precision needed to click the buttons.

**Hick's Law** states the time it takes to make a decision increases with the number and complexity of choices. To comply with this law, we restricted user options to include moving forward, backwards, returning home, and selecting between lessons one or two. These limitations reduce the number of options available so users aren't overwhelmed.

**Jakob's Law** explains that users expect a website to follow the typical conventions that are seen on similar sites. Typically, tutorial modules include a navigation bar, arrows, visual imagery, and so on; therefore, we kept those same mechanics.

**Coherence Principle** is the belief that reducing irrelevant content improves overall learning. Therefore, by keeping the steps and explanations in our module as straightforward and concise as possible, we will prevent any confusion during the setup process. By including annotations on the images and directions under the steps and using only necessary text and graphics, we won't distract users.

**Signaling Principle** explains how people understand better when cues highlight the organization of essential content. To demonstrate this, we utilized arrows on each slide to direct the user where to navigate throughout the various steps. Additionally, the home menu signals what the tutorial will be discussing in the lesson displays. This will organize information so that users will understand what to expect.

**Multimedia Principle** states that people tend to learn better from pictures and words rather than with words alone. Additionally, a picture and text allow for the essential content to be properly processed in users' working memory. For this principle, we made sure that the visual examples, along with the annotations explaining the steps, complement each other for further understanding.

**Spatial Contiguity Principle** states that users learn better when relative pictures and texts appear close. Since the visual examples are explanative, we made sure to keep the text close to their respective graphics and added colorful shapes and lines so users can understand what the text is referring to.

**Extraneous Cognitive Load** explains the amount of effort it takes for working memory to process non-essential, meaningless content. In order to combat this, we kept the design of the prototype rather minimalistic so the user wouldn't be distracted by any unnecessary elements. By using this method, it reduces the amount of extraneous cognitive load.

**Germane Cognitive Load** refers to the amount of effort needed for working memory to process helpful yet non-essential content. To not overload the user, only important and necessary information to aid in the learning process is used in our module. Overall, it is important for the

user to focus and remember the steps they need to accomplish their goals of downloading and installing a .cur file.