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User Interface Design 2

Section 1

Final Project Proposal

My final project will consist of a how-to guide teaching users how to record their computer screen and microphone with windows 10's built-in recording features. As well as viewing their captured recordings and basic trimming.

In the creation of my tutorial interface, I will adhere to **Miller's law** which states that the average person can only keep 7 ± 2 items in their **working memory**, which is the same as short-term memory by only having 5-7 major steps in each section. I'll also complete this by **chunking** similar steps together, so I don't overwhelm the user. Chunking helps users process essential information in smaller parts. I will effectively chunk my steps by gauging my audience's prior knowledge and grouping similar steps in each section together. **Tesler's law** states that every system has an inherent amount of complexity that cannot be removed. This causes **intrinsic cognitive load**, effort that is required and cannot be removed in a user's working memory. I will have to make sure I consider Tesler's law while creating my interface. I want to make sure I don't simplify information to the point of abstraction, because that won't be helpful to the user.

I will apply **Jakob's Law** to my tutorial, which states that users prefer your site to work the same as other sites they already know, by adhering to common conventions used by other tutorials. Users already have a set **schema** or idea of how tutorials are supposed to look and feel, so I will make sure steps are in chronological order, and have a forward and backward button throughout the interface. This also takes advantage of this users **Long term memory**, thoughts and memories that they have but are subconscious.

Hick's Law states the time it takes for a user to make a decision increases with the number of choices and complexity of said choices. My tutorial will take advantage of this by only asking the user required choices such as which section they want to start in and to go forward or go back.

Taking the **Von Restorff Effect** into consideration which states that in a group of similar objects the one that differs is most likely to be remembered. My tutorial will take advantage of this by highlighting and bolding key phrases or steps throughout the tutorial. When looking at a group of steps on a page information can mesh together and become repetitive, so if there's something I want the users to really remember I will make sure it stands out from the rest.

The **Multimedia principle** states that "People learn better from words and pictures than from words alone." In my project, I will follow this principle by using a picture that specifically shows the user where to right-click in windows and what button to press to edit existing recordings they have captured accompanied by the corresponding textual steps explaining the same thing.

In my project, I also will follow the **Spatial contiguity principle** which, states that "Students learn better when corresponding words and pictures are presented near rather than far from each other on the page

or screen." better put students learn better when corresponding words and pictures are integrated. I will apply this to my project by integrating key text information in my explanative graphics. For example, when I showcase a picture of where a user must right-click, I will integrate said step visually in close proximity to where the user must click to help with their understanding.

The **Signaling Principle** states that users learn better when there are cues that highlight the organization of required content. I plan to follow this principle by including an overview of all tutorial sections with headers and including boxes around exoplanetary graphics to signify steps on the screen.

The **Zeigarnik Effect** states that users remember uncompleted and interrupted task better than completed tasks. I will take advantage of this effect by adding a progress bar supplemented by a checkbox for the user to check throughout the tutorial.

The **Coherence principle** says that users learn better when extraneous material is excluded rather than included. The main idea of this principle is to reduce **Extraneous cognitive Load**. Extraneous cognitive load is Meaningless or Non-essential content that takes up space in the users working memory. I will follow this principle by taking into consideration the extraneous aspects of my interface and removing them. This can be decorative animations for buttons or complex backgrounds that look nice but don't add or help the user process information.

The **Law of Proximity** states that objects that are near each other tend to be perceived as a group. I will take advantage of this principle by keeping section headers and ctas within individual chapters in close proximity to each other in my tutorial's table or context so users naturally perceive them in the same group.

The **Serial position effect** is a principle which state that people have a tendency to best remember the first and last series or items. I believe ethe best way to take advantage of this is to put overviews or review pages that go over everything the user will or has learned at the beginning and end of each section so there's a better chance of them remembering all the necessary steps of the guide.

Germane Cognitive Load is the effort used in the working memory to deal with not necessary but helpful content. I will consider this by adding graphics to each step that supplement the required textual steps.

Fitt's Law is a principle which states that the time to acquire a target is a function of the distance to and size of the target. I will consider this when designing my interface by making CTA's and buttons big enough for the user to click accurately without being too precise and not making the user scroll or require any unnecessary movements so there's less mental effect required by the user.